Digital Media Software Engineering
Bachelor of Science Degree

Grand Rapids Community College
Transfer Guide

The Bachelor of Science in Digital Media Software Engineering is designed as a degree focused on the processes, procedures, and technology involved with software development. The degree will focus on fundamental computer science topics as well as processes and procedures commonly used in the production of software. This approach will provide students with the ability to construct software as well as the knowledge and understanding of the concepts used in commercial software development. This approach will allow graduates to seamlessly transition into the workforce integrating their knowledge of the industry and successfully design, develop, and deliver quality software applications. Software engineers are needed to create innovative software for health care, bio-informatics, business, entertainment, education, military, automotive industries, and more.

Course Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Ferris Equiv.</th>
<th>GRCC Course Title</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 131</td>
<td>COMM 121</td>
<td>Fundamentals of Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>EN 100 or EN 101</td>
<td>ENGL 150</td>
<td>College Writing or English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>EN 102</td>
<td>ENGL 250</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>GRCC</td>
<td>Varies</td>
<td>FSU General Education - Natural Science Elective w/ Lab (see advisor)</td>
<td>4</td>
</tr>
<tr>
<td>PH 245</td>
<td>PHYS 241</td>
<td>Calculus Physics I</td>
<td>4-5</td>
</tr>
<tr>
<td>PH 246</td>
<td>PHYS 242</td>
<td>Calculus Physics II</td>
<td>4-5</td>
</tr>
<tr>
<td>GRCC</td>
<td>Varies</td>
<td>FSU General Education - Culture Electives</td>
<td>6</td>
</tr>
<tr>
<td>PL 205</td>
<td>PHIL 216</td>
<td>Introduction to Ethics</td>
<td>3</td>
</tr>
<tr>
<td>GRCC</td>
<td>Varies</td>
<td>FSU General Education - Self &amp; Society Elective</td>
<td>3</td>
</tr>
<tr>
<td>EC 251</td>
<td>ECON 221</td>
<td>Principles of Economics I</td>
<td>3</td>
</tr>
<tr>
<td>EC 252</td>
<td>ECON 222</td>
<td>Principles of Economics II</td>
<td>3</td>
</tr>
<tr>
<td>MA 133</td>
<td>MATH 220</td>
<td>Calculus with Analytical Geometry I</td>
<td>5</td>
</tr>
<tr>
<td>MA 134</td>
<td>MATH 230</td>
<td>Calculus with Analytical Geometry II</td>
<td>5</td>
</tr>
<tr>
<td>BA 254 or MA 215 or PY 281</td>
<td>STQM 260</td>
<td>Business Statistics or Statistics or Introduction to Statistics</td>
<td>3-4</td>
</tr>
<tr>
<td>CIS 171</td>
<td>ISYS 200</td>
<td>Database Design and Development</td>
<td>3</td>
</tr>
<tr>
<td>BA 207</td>
<td>BLAW 321</td>
<td>Business Law I</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Grand Rapids Community College Credits 58-61

Please refer to FSU's General Education Requirements at: http://www.ferris.edu/htmls/academics/gened/index.htm

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.

Students are encouraged to work with their Ferris advisor for selection of any electives, to ensure transferability and to minimize credits taken.

<table>
<thead>
<tr>
<th>Course</th>
<th>Ferris Course Titles</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 311 or ENGL 321</td>
<td>Advanced Technical Writing or EN 249 option offered @ GRCC</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 325</td>
<td>Advanced Composition or Advanced Business Writing</td>
<td>3</td>
</tr>
<tr>
<td>SENG 101</td>
<td>Computer Programming I</td>
<td>3</td>
</tr>
<tr>
<td>SENG 102</td>
<td>Computer Programming II</td>
<td>3</td>
</tr>
<tr>
<td>SENG 300</td>
<td>Software Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>SENG 301</td>
<td>Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>SENG 315</td>
<td>Software Component Design</td>
<td>3</td>
</tr>
<tr>
<td>SENG 400</td>
<td>Engineering Enterprise Software Applications</td>
<td>3</td>
</tr>
<tr>
<td>SENG 430</td>
<td>Programming Graphical User Interfaces</td>
<td>3</td>
</tr>
<tr>
<td>SENG 160</td>
<td>Software Engineering Methodologies and Processes</td>
<td>3</td>
</tr>
<tr>
<td>SENG 170</td>
<td>Software Requirements Management</td>
<td>3</td>
</tr>
<tr>
<td>SENG 210</td>
<td>Software Configuration Management</td>
<td>3</td>
</tr>
<tr>
<td>SENG 302</td>
<td>Software Quality Assurance</td>
<td>3</td>
</tr>
<tr>
<td>SENG 350</td>
<td>Software Design and Architecture</td>
<td>3</td>
</tr>
<tr>
<td>SENG 355</td>
<td>Software Engineering Tools</td>
<td>3</td>
</tr>
<tr>
<td>MATH 322</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>PROJ 320 or DAGD 315</td>
<td>Project Management or Digital Media Productions</td>
<td>3</td>
</tr>
<tr>
<td>SENG 420</td>
<td>Software Development Industry Certification</td>
<td>3</td>
</tr>
<tr>
<td>SENG 491</td>
<td>Applied Internship</td>
<td>3</td>
</tr>
<tr>
<td>SENG 499</td>
<td>Capstone in SENG</td>
<td>3</td>
</tr>
<tr>
<td>Varies</td>
<td>Career Domain Electives</td>
<td>12</td>
</tr>
<tr>
<td>ISI- Cyber Security</td>
<td>DAGD – Game Development</td>
<td></td>
</tr>
<tr>
<td>BUS – Business Management</td>
<td>CIS – Database and Systems Analyst</td>
<td></td>
</tr>
</tbody>
</table>

Total Ferris Credits 69

Credits Required for Degree 127-130

Program Offered at:
Ferris Statewide, FSU-Grand Rapids
(616) 451-4777 or (800) 998-3425
School of Digital Media
(800) 998 - 3425
frederickbaker@ferris.edu
www.ferris.edu/dmse
www.ferris.edu/transfer

Updated Fall 2017
Ferris State University is an equal opportunity institution. For information on the University's Policy on Non-Discrimination, visit ferris.edu/non-discrimination.
General Admission Criteria
The Digital Media Software Engineering, B.S. is a course-specific degree completion program with a four-year sequence that begins promptly upon acceptance and enrollment. It is expected that students entering this technology intensive program already have solid foundation skills in dealing with personal computers (PCs). A completed Associate degree is not required to be admitted. While students with earned college credit may apply to the program, students are encouraged to apply as a freshman/first-year student and be dually enrolled with Grand Rapids Community College. Recent high school graduates need an ACT composite score of 21 / SAT score of 1070 and a high school or college grade point average of 2.70. All courses transferred into Ferris must be a “C” or higher including courses used in the SENG required core and recommended electives to be used towards the minimum 127 semester credits required for graduation. Official transcripts from all accredited colleges/universities must be submitted with the Ferris application. Financial aid is available for dually enrolled students.

Advising Notes
It is recommended that potential applicants meet with an advisor to review the degree, course schedule, and have any questions answered prior to completing an application. 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 course work may reduce the chance of completing a course that will not apply toward the selected degree. Once admitted, students must continue to meet with an advisor as they work toward graduation.

Transfer Student Orientation
All new students to Ferris State University are required to complete an orientation

Online Learning
Select courses 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 an off-campus location). The “Online Readiness Tutorial” is required for students who register for an online course or are completing an online degree. Students must demonstrate competency in Blackboard skills. This may be done by taking a tutorial and quiz, or, for students who have already taken and passed online courses, they can submit a waiver request. Students should check with the department that offers the class to determine its particular needs and/or the Ferris advisor regarding registration for online course work.

Reverse Transfer Agreement
The Community College and Ferris have entered into a partnership in order to work collaboratively and creatively to increase student completion of associate and bachelor degrees. The partners work together to provide a seamless transfer experience and increase student retention and completion at both the community college and Ferris.

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.

Disclaimer
This is a guide for students who plan to transfer to Ferris State University. This guide is not intended to be a contract with Ferris. The information on this guide is subject to change. Students should contact their community college or Ferris to keep informed of changes. Final responsibility for verifying all transfer information lies with the student. Please refer to the effective and/or revised date on the bottom of the guide.