## Midwestern State University Fall 2021 CATALOG

## BS in Computer Science Degree / Accelerated Master Program - Recommended 5-Year Plan B.S. - 120 Credit Hours (25 Advanced UG Hours & 9 Graduate Hours Required) Accelerated M.S. – Additional 21-24 Graduate Credit Hours

| Fall Semester  | Spring Semester   |
|--|---|
| ** 14-15 hours **<br>CMPS 1044 – Computer Science 1<br>MATH 1534 – Pre-Calculus<br>ENGL 1143 – Academic Research and Writing<br>Lab Science – 3-4 hours  | ** 14-15 hours **<br>CMPS 1063 – Data Structures & ADT<br>CMPS 2084 – Introduction to Computer Architecture<br>MATH 1634 – Calculus 1<br>Lab Science – 3-4 hours  |
| ** 16 hours **<br>CMPS 2143 – Object-Oriented Programming<br>CMPS 2433 – Discrete Structures & Analysis<br>MATH 1734 – Calculus 2<br>HIST 1133 – American History to 1865<br>Communications – 3 hours  | ** 15 hours **<br>CMPS 3013 – Advanced Structures & Algorithms<br>CMPS 3023 – Logic Design<br>Social & Behavioral Sciences – 3 hours<br>HIST 1233 – American History since 1865<br>Cultural & Global Understanding – 3 hours  |
| <ul> <li>** 16 hours **</li> <li>CMPS 4143 – Contemporary Programming<br/>Languages</li> <li>CMPS Elective – 3 hours</li> <li>PHYS 1624 – Mechanics, Wave Motion &amp; Heat<br/>Language, Philosophy &amp; Culture – 3 hours</li> <li>MATH 2753 or 3533 or 4243</li> </ul> | <ul> <li>** 16 hours **</li> <li>CMPS 3233 – Theory of Computation</li> <li>CMPS Advanced Elective – 3 hours</li> <li>POLS 1433 – American Government</li> <li>PHYS 2644 – Electricity, Magnetism &amp; Optics</li> <li>Creative Arts – 3 hours</li> <li>Student can apply for the accelerated program after</li> </ul> |
|  | meeting program requirements.   |
| ** 15 hours **<br>POLS 1333 – American Government<br>CMPS Advanced Elective – 3 hours<br>CMPS Advanced Elective – 3 hours<br>CMPS 5143 – Advanced Operating Systems or<br>CMPS 5133 – Advanced Computer Architecture   | ** 12-14 hours **<br>CMPS 4991 – Seminar<br>CMPS Advanced Elective – 3 hours<br>Electives – 3-5 hours<br><b>CMPS 5153 – Advanced Software Engineering</b><br>*CMPS 6901 Ind. Grad Study in CMPS   |
| CMPS Graduate Elective – 3 hours<br>or *CMPS 6903 Research Methods in CMPS   | *Student proposes the master project or thesis work   |
| *The student starts file paper courses.  |   |
| ** 10-12 hours **<br>CMPS 5133 – Advanced Computer Architecture or<br>CMPS 5143 – Advanced Operating Systems   | ** 10-12 hours **<br>CMPS 5243 – Algorithm Analysis<br>CMPS Graduate Elective – 3 hours<br>CMPS Graduate Elective – 3 hours   |
| CMPS 5113 – Adv Prog Language Concepts<br>CMPS Graduate Elective – 3 hours<br>CMPS Graduate Elective – 3 hours   | CMPS Graduate Elective – 3 hours<br>or *CMPS 6901 Ind. Grad Study in CMPS   |
| or * CMPS 6901 Ind. Grad Study in CMPS   | *Student presents final oral defense of master work   |
| *Student continues the master project or thesis work   |   |

\*Courses in bold are the ones that count towards the BS and the MS.