Computer Science Major

Minnesota State University MANKATO

Eligibility to Apply for Upper Division CS Program

CIS Core Courses

CIS 121 - Introduction to Programming 4Cr
CIS 122 - Data Structures 4Cr
CIS 223 - Algorithms 4Cr
CIS 224 - Computer Architecture 4Cr

Math Courses

MATH 121 - Calculus I 4Cr
MATH 122 - Calculus II 4Cr
MATH 247 - Linear Algebra I 4Cr
MATH 280 - Discrete Mathematics for Computer
　　　　　Science I 4Cr

General Education Courses

ENG 101 - Foundations of Writing & Rhetoric 4Cr
COMM 102 - Public Speaking 3Cr

Science Courses - Choose 8 - 9 Credits

BIOL 105 - General Biology I 4Cr
BIOL 106 - General Biology II 4Cr
CHEM 201 - General Chemistry I 5Cr
CHEM 202 - General Chemistry II 5Cr
GEOL 121 - Physical Geology 4Cr
PHYS 221 - General Physics I 4Cr
PHYS 222 - General Physics II 3Cr
PHYS 223 - General Physics III 3Cr
PHYS 223 - General Physics II Laboratory 1Cr
PHYS 233 - General Physics III Laboratory 1Cr
*PHYS 222 & 232 must be taken together.
*PHYS 223 & 233 must be taken together

Upper Division CS Courses

CS Core Courses

CIS 301 - CS Core:Opertating Systems 2Cr
CIS 302 - CS Core:Software Engineering & Parallel
　　　　　Computing... 2Cr
CIS 303 - CS Core:Programming Language 2Cr
CIS 304 - CS Core:Databases & Information Security.2Cr

Project Courses

CS 391W - Computer Science Project 1 .... 4Cr
CS 392W - Computer Science Project 2 .... 4Cr
CS 491W - Computer Science Capstone 1 .... 4Cr
CS 492W - Computer Science Capstone 2 .... 4Cr

Math Courses

MATH 380 - Discrete Mathematics for Computer
　　　　　Science II 4Cr
MATH 354 - Concepts of Probability & Statistics 4Cr

Seminar Courses - 1 Credit/Semester

CS 495 - Computer Science Seminar 4Cr

CS Electives - Choose 12 Credits

CS 306 - Network Architectures 2Cr
CS 308 - Applied Algorithms 2Cr
CS 401 - Topics in Operating Systems 2Cr
CS 406 - Topics in Programming Languages 2Cr
CS 410 - Topics in Algorithms & Computability 2Cr
CS 415 - Topics in Parallel & Distributed Computing 2Cr
CS 420 - Topics in Architecture & Organization 2Cr
CS 435 - Topics in Intelligent Systems 2Cr
CS 440 - Topics in Information Management 2Cr
CS 445 - Topics in Information Assurance & Security 2Cr
CS 450 - Topics in Computational Science 2Cr
CS 465 - Topics in Graphics & Visualization 2Cr
CS 470 - Topics in Human Computer Interaction 2Cr
CS 480 - Topics in Software Engineering 2Cr
CS 485 - Topics in Platform - Based Development 2Cr

Minor
Upon completion of this program, a mathematics minor can be earned.