

# COMPUTER SCIENCE

## JCJC CURRICULUM SHEET

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The sample program of student prepares the student for the B.S. degree program in computer science. There are several options available in the computer science major. These include Applied Computer Science, Data Processing, and Statistics. Bachelor of Science graduates begin careers as computer programmers, systems analysts, programmer analysts, software engineers, systems programmers, computer system engineers and related positions.

By coupling the computer science major with other majors or minors (Accounting, Physics, Engineering Technology, Geology, Business, etc.), the student may select careers in numerous fields as an applied computer specialist.

### FRESHMAN YEAR

#### ENGLISH COMPOSITION (6 HRS)

ENG 1113 English Comp. I 3  
ENG 1123 English Comp. II 3

#### HISTORY (6 HRS in one sequence)

HIS 1113 Western Civ. I 3  
HIS 1123 Western Civ. II 3  
HIS 2213 American History I 3  
HIS 2223 American History II 3

#### MATH (11 HRS)

MAT 1313 College Algebra 3  
MAT 1323 Trigonometry 3  
MAT 1815 Calculus I 5

#### LAB SCIENCE (SELECT 8 HRS)

CHE 1214 Chemistry I 4  
CHE 1224 Chemistry II 4  
BIO 1134 Biology I 4  
BIO 1144 Biology II 4  
BIO 1314 Botany 4  
BIO 2414 Zoology I 4

#### SPEECH (3 HRS)

SPT 1113 Speech 3

\* MSU requires Chem I and either Botany or Zoology I  
USM accepts BIO I & BIO II or CHEM I & II  
UM requires CHEM I & CHEM II

\*\* Students having no prior computer experience must enroll in CSC 1113 Intro to Computer Concepts  
CSC 1113 does not count toward a degree in Computer Science.

### SOPHOMORE YEAR

#### HUMANITIES (3 HRS)

ENG 2413 World Lit. 3

#### FINE ARTS (3 HRS)

ART 1113 Art Appreciation **or**  
MUS 1113 Music Appreciation 3

#### LAB SCIENCE (10 HRS)

PHY 2515 Gen. Physics IA 5  
PHY 2525 Gen. Physics IIA 5

#### SOCIAL SCIENCE (Select 6 HRS)

PSY 1513 Gen. Psychology 3  
ECO 2113 Economics I 3  
SOC 2113 Sociology 3

#### MATH

MAT 1825 Calculus II 5  
MAT 2813 Calculus III 3

#### COMPUTER PROGRAMMING (3 HRS)

CSC 1213 Visual Basic 3  
CSC 2133 Prog. I (C++) 3

**Note: It is suggested that students majoring in Computer Science consider a double major in Computer Science and Business, or Mathematics.**

## COMPUTER SCIENCE -- NOTES:

Social Science. UM requires a two course sequence of Social Science in the B.S. program. Add EPY 2533 Human Growth and Development to PSY 1513, or select another six hour social science sequence in one subject. Other subjects offered at JCJC with a two-course sequence are Political Science, Economics, and Sociology.

Humanities (Literature, Philosophy, Foreign Language; History, which may be applied either as a social science or one of the humanities). UM requires 6 hours of sequential work in one field of the humanities.

Selecting science courses. USM & UM specify a second two-course sequence in a lab science. MSU: one lab science elective (4 hrs) from any Biological or Physical Lab Sciences.

A foreign language is required at UM (B.A. program only).

Additionally, students should plan to complete no more than half of the hours required for a bachelor's degree prior to transferring to the senior institution. The student should consult the catalog of the senior institution for specific admissions procedures and other details concerning the program of study.

This CHECK SHEET should be used to keep a careful record of grades for each of the courses and should be presented to the student's advisor for planning the schedule of courses each semester at JCJC.

**What's Offered at MSU.** The B.S. degree is offered by the Department of Computer Science at MSU. The B.S. is the primary professional degree. Several double-major programs are also available. Students study data and data structures and the algorithms to process these structures; principles of computer architecture -- both hardware and software; problem solving and design methodologies; numerical analysis, operations research, and artificial intelligence; and language design, structure and translation techniques. Additionally, a double major in computer and math is available at MSU.

**What's Offered at UM.** The B.A. degree is offered in the College of Liberal Arts, and the B.S. professional degree is offered in the School of Engineering. The B.S. is designed to give the student a thorough education in contemporary Computer Science while allowing sufficient flexibility for the student to pursue individual interests in related technical fields.

**What's Offered at USM.** At USM the Department of Computer Science and Statistics offers the B.S. degree and allows students to select concentrations in specific areas such as Software Engineering, Data Base, Statistics or Operations Research. Graduates of this program are prepared to begin professional careers in computer science or to pursue graduate studies.

USM also offers a major in Computer Engineering Technology. A career oriented program, this major offers the student a variety of topics concerning the uses of computers and digital electronics in our technical society. Extensive laboratory experience aids the student in the design, analysis, and application of digital electronics to the problems encountered in modern technology. Graduates are expected to be knowledgeable in digital electronics, computer hardware, and applications involving the computer as a problem-solving tool.