

Student Name _____ Instructor Name _____

High School or Vocational Center _____ Grade _____

COMPETENCY RECORD FOR ARTICULATION
Muskegon Community College
Computer Information Systems

Please check below each skill the student has mastered as described, with 80 percent accuracy, or with an A or B grade. The skills needed for articulation of each course are listed.

CIS 120A
Introduction to Computer Information Systems
3 Credit Hours

Task	Satisfactory	Unsatisfactory
Identify the following computer sizes along with suitability and limitations to applications:		
PDA		
Notebook/Laptop		
Desktop		
Minicomputer/Midrange computer		
Mainframe computer		
Supercomputer		
Identify the following application software and explain how they increase personal productivity:		
Word processing		
Electronic spreadsheets		
Presentation management		
Database management		
Email		
Image editing		
Personal finance		
Groupware		
Web authoring.		
Explain how the following hardware work:		
Input		
· Keyboard		
· Pointing devices		
· Voice/audio		
· Scanners (image, OCR and bar code)		
· OMR		
Output		
· Monitors (CRT, LCD, Plasma)		
· Printers		
· Audio		

· Quality (Resolution, Dot Pitch)		
Processing		
· Motherboard		
· Memory (RAM, ROM, BIOS, CMOS, Registers, Pipelining)		
· CPU(ALU and Control)		
· IC		
· Clock Speed		
· Ports (serial, parallel, USB and Firewire)		
· Cards (NIC, sound, video and modem)		
· Binary concept, bits and bytes, ASCII and EBCDIC		
Storage		
· Hard disk		
· Floppy		
· Zip disk		
· Thumb/Flash drive		
· Removable hard drive		
· CD (CD-R and CD-RW)		
· DVD (DVD-R and DVD-RW)		
· Tape		
· Storage measurements (Kilo, Mega and Giga)		
Explain how the following system software work:		
Language Translation		
Utilities		
Operating Systems		
· Types: PC-base and client/server		
· Booting		
· Interfaces: GUI, command line and voice activated		
· Program Management: Multitasking, Multiprocessing and Fault tolerant		
· Memory Management: Virtual Memory and Paging/Swapping		
· Job Management: Buffers, Spooling and Queues		
· Device Management: Drivers and Plug and Play		
Explain how the following are used for systems design and implementation:		
Stages in systems development life cycle		
Prototyping		
Stages in software development		
Commonly used programming languages and related applications		
Computer professionals		
· Data entry operator		
· Computer operator		
· Computer programmer		
· Systems analyst		

· Network administrator		
· Database administrator		
· Management information systems (MIS) director		
· Chief Information Officer (CIO)		
Networking		
Understand the purpose of network login procedures		
Definition of local area network (LAN) versus wide area network (WAN).		
Define a network interface card (NIC) and how one is used on a LAN		
Define a modem and how one is used on a WAN		
Explain how the modem uses analog signaling to transmit binary data		
Define broadband versus baseband transmissions		
Define a router/gateway and how used at home or in a small office or home office (SOHO) on a LAN		
Explain principles of a peer-to-peer network versus those of a file server/client server network		
Identify characteristics of coaxial, unshielded twisted pair (UTP) and fiber optic cabling		
Identify characteristics of wireless data transmission		
Address security and what software or hardware firewalls do to protect networks		
Computers and their impact on society		
Identify common types of computer-based crimes		
Identify common computer-based security and privacy issues and be able to explain how people can protect themselves. Topics should include Spyware, Adware, Spam and Virus protection		
Students should be able to use the Internet or local retail store to identify the components of a personal computer that meets their needs and fits into their budget		
Computer industry and careers		
Identify the name, educational preparation and salary ranges of at least five computer-related careers		
Identify how the following computers applications are used in business:		
Transaction Processing Systems (Order Entry, Billing, Accounts Receivable, Account Payable, General Ledger, Payroll, Inventory Control)		
Task	Satisfactory	Unsatisfactory
Management Information Systems: people, decision making and reporting		
Decision Support Systems		
Expert Systems		
Disaster Recovery		
History of data processing		

Identify pre-1940 computer-like devices & their inventors		
Identify post-1940 computer generations by date and hardware/software innovations		
Perform the following personal computer skills:		
Basic Windows techniques (size, move, cascade, tile, open, close, restores)		
Basic mouse operations (click, double-click, right-click, drag and drop)		
Install and uninstall software		
File Management: create folders, delete files, rename files, copy and move files from one folder to another folder and/or another disk		
Find lost files on disk using operating systems search feature		
Use an Internet browser and search sites to find Web pages and to download files		
Send email and attachments		
Customize desktop with shortcuts, etc.		
Use operating system tools to scan disk for errors and defragment disk		
Format disk		
Perform the following word processing skills:		
Change margins and orientation		
Turn Ruler on and off		
Change tabs and indentation		
Change font		
Change horizontal alignment		
Correct errors using backspace and delete keys		
Select (highlight) a word, sentence, paragraph and entire document		
Copy or Cut text and Paste selected text into new location within the same document or within another document		
Create a bulleted list		
Save a document to a specific destination under a specific name and using different file format (rich text format, Word format, Works format, etc.)		
Open a file from a specific source		
Print an open file to a designated printer		
Perform the following electronic spreadsheets skills:		
General spreadsheet techniques which includes proper formatting of labels and numbers (could also include conditional formatting) along with cell width adjustments.		
Move, copy and delete cells		
Use arithmetic operators (+ - * /) along with sum, max, min, count, and avg functions. Students should understand and be able to use the computational order of precedence as well as parentheses in complex formulas		

Create, open, save, print content and print formula view of worksheet data		
Produce pie, bar and line charts using worksheet data		
Perform the following database management skills:		
Understand database management system (DBMS) capabilities		
Create and open a relational database		
Create a file/table structure definition using a variety of data types and a primary key that integrate data between two or more relational tables		
Create a query that utilizes simple, compound or wildcard-based criteria that integrate data from two or more relational database tables		
Create a data entry form for input into a database table using a wizard		
Create a report from a database table or query results using a wizard		
Print a table, query results and report		
Understand byte, field, record and file (table) relationships		
Create error-free computer programs with code for the following: (These skills can be demonstrated in any high level language. Note: HTML, XHTML and XML are not high level programming languages)		
Variables and their declarations		
Looping structure (Do While)		
Selection structure (Select, IF or Case structure)		
Sequence structure		
Basic calculations (+, -, * and /) and operators (>, >=, =, not =, < and <=)		
Using a text editor to enter code		
High-level vs. binary code and the function of the compiler or interpreter		
Executing and testing program code		
Syntax vs. logical errors and debugging		

Instructor's Signature _____ Date _____