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 183
Networking Technologies
3 Credit Hours

Task	Satisfactory	Unsatisfactory
Describe the differences between analog and digital data		
Describe the ways in which analog and digital signals are measured and encoded		
Identify the major bounded and unbounded transmission media		
Describe the key characteristics of the transmission media types, including speed, cost, ease of installation and reliability		
Differentiate between baseband and broadband		
Differentiate between frequency-division, time-division and wavelength division multiplexing		
Differentiate between synchronous and asynchronous communication		
Identify the characteristics of a Bus, Star and Ring physical given network topologies. Identify the logical functions of these network topologies		
Identify the advantages and disadvantages of each of the above network topologies		
Differentiate between logical and physical topologies		
Differentiate between channel access methods		
Identify the advantages and disadvantages of the different channel access methods		
Identify the seven layers of the OSI model		
Describe the functions of repeaters, routers, bridges, switches and gateway hardware. Understand circuit, message and packet switching along with the various modes in which a switch can function		
Identify physical layer interfaces, such as RS-232, CCITT V-Series, CCITT X-Series, Etc.		

Task	Satisfactory	Unsatisfactory
Differentiate between the common data-link protocols such as SDLC, HDLC, and LAPB		
Describe the key features of the IEEE 802 series standards		
Describe the key features of FDDI and ATM standards		
Describe the services provided by protocol suites		
Identify the TCP/IP model layers. Contrast these layers and their responsibilities with the OSI model, Identify and know the TCP/IP Hybrid model		
Understand and know the principles, frames and fields of VLANs and VPN		
Understand the different frame types of Ethermet and the fields relative to each		
Understand TCP/IP communication protocols. Understand network and subnet masking along with the ANDing filtering the mask provides. Be able to design and configure a multi-subnetted network using IPv4 protocol. Understand subnet and host range addressing and the use of a subnet mask that defines the subnets		
Describe how the services provided by different protocols correspond to the different levels of the OSI model		
Describe the services provided by SNA, DNS, the Internet Protocol Suite, NetWare, and Apple Talk		
Describe how DNS works and describe the hierarchical structure of the DNS system		
Understand how Ethernet utilizes CSMA/CD and Appletalk utilizes CSMA/CA. How and why do these principles work?		
Understand the principles and working of token-ring		
Understand wireless networks. Understand the principles of waveform cancellation, multipathing, the hidden node, CSMA/CA, RTS-CTS, ad-hoc and infrastructure systems along with the 802.11x standards, encryptions, configuration and advance methods of securing		

Instructor's Signature_____Date_____