

Rule 24 Matrix
Form Revised by NDE: March 2007
Matrix Reviewed by WSC: May 2009 – Dr. Tim Garvin
Table of Alignment of Standards and Assessments

Endorsement: Information Technology
Total Hours Required by Rule 24: 15

Grade Levels: K-12
Program Hours Required by Institution: 15

Endorsement Type: Supplemental
Name of Institution: Wayne State College

Endorsement Program Requirements: Nebraska teacher education institutions offering this endorsement program must have on file, within the institution, a plan which identifies the courses and the course completion requirements which the institution utilizes to grant credit toward completion of this endorsement.

Standard/Description							
006.33D Certification Endorsement Requirements: This endorsement requires a minimum of 15 semester hours in information technology courses and a minimum of 40 hours of related clinical experiences at elementary and secondary levels.			Candidate Proficiencies				
Course #, Title, and Credits	Course Assessment(s)	Key Program Assessment(s)	Content Knowledge	Pedagogical Knowledge	Skills	Dispositions	P-12 Student Learning
CSC 442/542 Programming, Design & Documentation (3)	Projects, Course Grade	Documented student log of clinical experiences with accompanying signature of school official responsible. Course Grades/GPA.	X	X	X		
CSC 448/548 Web and Multimedia Content, Design, and Administration (3)	Projects, Course Grade		X	X	X		
CIS 454/554 Technology Platforms: Hardware and Operating Systems (3)	Projects, Course Grade		X	X	X		
CIS 457/557 Networking and Technology Management (3)	Labs, Projects, Lesson Plans, Course Grade		X	X	X		
CIS 475/575 Topics in CIS: Emerging Information Technology (3)	Assignments, Projects, Lesson Plans, Course Grade		X	X	X		

Standard/Description							
A. Demonstrate knowledge of ethical, human, legal and social issues, which may include privacy, accessibility, copyright, intellectual property, plagiarism, and information validity.			Candidate Proficiencies				
Course #, Title, and Credits	Course Assessment(s)	Key Program Assessment(s)	Content Knowledge	Pedagogical Knowledge	Skills	Dispositions	P-12 Student Learning
CIS 457/557 Networking and Technology Management (3)	Labs, Projects, Lesson Plans, Course Grade		X	X	X		
CIS 475/575 Topics in CIS: Emerging Information Technology (3)	Assignments, Projects, Lesson Plans, Course Grade		X	X	X		

Standard/Description							
B. Demonstrate knowledge of classroom and instructional management methodologies using appropriate materials, methods, resources, and curricula for teaching information technology, which may include: 1. Instructional strategies that create authentic and meaningful learning experiences; 2. Instructional strategies for dealing with learning styles and diverse populations; and 3. Effective methods of assessment and evaluation with appropriate feedback techniques.			Candidate Proficiencies				
Course #, Title, and Credits	Course Assessment(s)	Key Program Assessment(s)	Content Knowledge	Pedagogical Knowledge	Skills	Dispositions	P-12 Student Learning
CIS 457/557 Networking and Technology Management (3)	Labs, Projects, Lesson Plans, Course Grade		X	X	X		
CIS 475/575 Topics in CIS: Emerging Information Technology (3)	Assignments, Projects, Lesson Plans, Course Grade		X	X	X		

Standard/Description							
C. Demonstrate knowledge of methods/skills appropriate to planning and designing learning environments, which may include: 1. Classroom design that includes access to technical resources and tools; and 2. Management skills and techniques.			Candidate Proficiencies				
Course #, Title, and Credits	Course Assessment(s)	Key Program Assessment(s)	Content Knowledge	Pedagogical Knowledge	Skills	Dispositions	P-12 Student Learning
CIS 457/557 Networking and Technology Management (3)	Labs, Projects, Lesson Plans, Course Grade		X	X	X		
CIS 475/575 Topics in CIS: Emerging Information Technology (3)	Assignments, Projects, Lesson Plans, Course Grade		X	X	X		

Standard/Description							
D. Demonstrate knowledge and application of basic programming concepts, that may include: 1. Design principles and common programming structures; 2. Procedural and object-oriented programs; 3. Application development tools; 4. Program solutions coded in a common high-level language; and 5. Strategies for testing and debugging code.			Candidate Proficiencies				
Course #, Title, and Credits	Course Assessment(s)	Key Program Assessment(s)	Content Knowledge	Pedagogical Knowledge	Skills	Dispositions	P-12 Student Learning
CSC 442/542 Programming, Design & Documentation (3)	Projects, Course Grade		X	X	X		

Standard/Description								
E. Demonstrate knowledge in the areas of selection, installation, management, and maintenance of infrastructure for information support and services, which may include: <ol style="list-style-type: none"> 1. Operating systems; 2. Organization and architecture of computer systems and software; 3. Database design, development, and management; 4. Technical research and documentation; 5. Troubleshooting strategies; 6. Communication skills; 7. Emerging hardware and software technologies; 8. Security of hardware, software, and data; and 9. Ergonomic principles that foster a healthy and productive environment. 			Candidate Proficiencies					
Course #, Title, and Credits	Course Assessment(s)	Key Program Assessment(s)	Content Knowledge	Pedagogical Knowledge	Skills	Dispositions	P-12 Student Learning	
CIS 454/554 Technology Platforms: Hardware and Operating Systems (3)	Projects, Course Grade		X	X	X			
CIS 457/557 Networking and Technology Management (3)	Labs, Projects, Lesson Plans, Course Grade		X	X	X			
CSC 448/548 Web and Multimedia Content, Design, and Administration (3)	Projects, Course Grade		X	X	X			
CIS 475/575 Topics in CIS: Emerging Information Technology (3)	Assignments, Projects, Lesson Plans, Course Grade		X	X	X			

Standard/Description								
F. Demonstrate a basic knowledge of interactive media, which may include: <ol style="list-style-type: none"> 1. Web-based media and applications; 2. Multimedia tools; and 3. Digital media. 			Candidate Proficiencies					
Course #, Title, and Credits	Course Assessment(s)	Key Program Assessment(s)	Content Knowledge	Pedagogical Knowledge	Skills	Dispositions	P-12 Student Learning	
CSC 448/548 Web and Multimedia Content, Design, and Administration (3)	Projects, Course Grade		X	X	X			

Standard/Description								
G. Demonstrate a basic knowledge of network systems, which may include: <ol style="list-style-type: none"> 1. Network concepts and operating systems; 2. Management and security for networked environments; and 3. Emerging technologies. 			Candidate Proficiencies					
Course #, Title, and Credits	Course Assessment(s)	Key Program Assessment(s)	Content Knowledge	Pedagogical Knowledge	Skills	Dispositions	P-12 Student Learning	
CIS 457/557 Networking and Technology Management (3)	Labs, Projects, Lesson Plans, Course Grade		X	X	X			
CIS 475/575 Topics in CIS: Emerging Information Technology (3)	Assignments, Projects, Lesson Plans, Course Grade		X	X	X			