

# Marshall Community & Technical College

## Institutional Effectiveness & Outcome Assessment

### IE/OA Tool Kit

Program-Degree or Certificate

A.A.S. in Information Technology – Microsoft Certified Systems Engineer (MCSE) – One-Year Certificate Program

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Steps

Date Completed

1. Program Mission Statement 5-14-04
2. Statements of Intended Outcome 5-14-04
3. Curriculum Audit 5-14-04
4. Assessment Measures 5-14-04
5. Assessment Timetable 5-14-04
6. Outcomes Assessment Tool (Feedback Loop) 5-6-05
7. Resources Requested for Program Improvement (use space provided below) 5-6-05

Students often complain about crowded lab conditions in Corbly Hall 335 and 336 as a barrier to effective hands-on training necessary for success with skills based labs. We've gotten smaller desks and may get smaller computers in the Summer of 2005; however, those classrooms are much smaller than Corbly Hall 4<sup>th</sup> floor classrooms. We have mounted most of the equipment on mobile racks to allow some flexibility. If a larger computer lab became available, we could certainly use the space.

As the end of each semester, a few students complain because there are no Cisco trained lab assistants available and there are very few open lab hours for skills based exam preparation. We should investigate the possibility of hiring a former student (who may still be on campus pursuing a B.S. or M.S) to be available 10 or 15 hours a week for assisting students.

Each time IT225, Fundamentals of Wireless LANs is taught, the classroom size (Corbly Hall 335 and 336) dictates that students are so close together that radio frequency interference occurs between access points and hosts arranged in pods throughout both class rooms. Students typically work in small groups of 3 to 5 students but can't successfully complete all exercises because they can't prevent their lab equipment from picking up radio frequency signals from the neighboring pods. We need larger classrooms for teaching Cisco classes because the amount of equipment is double that of other IT courses.

8. New Directions Recommended for Program (IE Program Expansion, New Workforce Focus, etc.) (use space provided below) 5-6-05
- Industry trends dictate constant revision of IT curriculum and laboratory equipment. Staying abreast of internetworking equipment maintenance, IOS revisions, security threats and countermeasures, and Cisco Academy

required tasks requires significant time on the part of the Main Contact over and above class preparation, college activities, and student advising. The Main Contact needs release time to pursue strategies for developing further curriculum and enrollment.



# *Marshall Community & Technical College*

## *Institutional Effectiveness & Outcomes Assessment*

### ***IE/OA 1. PROGRAM MISSION STATEMENT***

Program-Degree or Certificate

**Network Systems Administration  
(MCSE) one-year certificate**

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**Program or Department Name**

Information Technology

**Team Members**

Scott Nicholas

**Date**

5-14-04

**Current Institutional Mission Statement**

Marshall Community and Technical College is a comprehensive student-centered college focused on teaching and learning, and responsive to changing and diverse needs.

**Program Mission Statement**

The Network Systems Administration (MCSE) one-year certificate program at Marshall Community and Technical College is dedicated to providing high quality education in Network Systems Administration and Systems Engineering, in order to prepare highly skilled personnel for rewarding careers that meet the dynamic industry needs of today's workplace.

# *Marshall Community & Technical College*

## *Institutional Effectiveness & Outcomes Assessment*

### *IE/OA 2. STATEMENTS OF INTENDED OUTCOMES*

#### **Program-Degree or Certificate**

**Network Systems Administration (MCSE) one-year certificate program**

#### **Team Members**

Scott Nicholas

#### **Date**

May 14, 2004

#### **Program Mission Statement**

The Network Systems Administration (MCSE) one-year certificate program at Marshall Community and Technical College is dedicated to providing high quality education in Network Systems Administration and Systems Engineering, in order to prepare highly skilled personnel for rewarding careers that meet the dynamic industry needs of today's workplace.

#### **STATEMENT OF INTENDED OUTCOME 1**

Students will be adequately prepared to take the following Information Technology national certification exams:

- CompTIA A+
- Microsoft MCSA
- Microsoft MCSE

#### **STATEMENT OF INTENDED OUTCOME 2**

Students will be able to deploy, monitor, administer, and optimize a network information system.

#### **STATEMENT OF INTENDED OUTCOME 3**

Students will utilize formal network systems engineering methodologies and techniques to analyze business requirements, and to create strategies, plans, or designs for the network information system of an entire organization, subsidiary, or division.

#### **STATEMENT OF INTENDED OUTCOME 4**

##### General Education Outcomes

- Communicate effectively using written and oral skills.
- Apply mathematics and basic scientific concepts for problem solving activities.
- Utilize technology competently.
- Use critical thinking skills.
- Develop an awareness of ethical behavior.
- Recognize the richness of diversity.







	○ Develop an awareness of ethical behavior	E	R	R	R	R	R	R	R	R	R	R								
	○ Recognize the richness of diversity	E																		
*Modeled after Hatfield (1999)		I = Introduced      E = Emphasized      R = Reinforced																		
<p><b>Introduces</b>-Student is not familiar with content/skill, behavioral, or affective disposition. Instruction concentrates on introducing students to the content area/skill and bring them to some predetermined level of competence.</p>		<p><b>Emphasizes</b>-Student should have brought basic content/skill to the component area. Instruction concentrates on enhancing content/strengthening skill and adding new content material/building more complex skills based on entrance competency.</p>					<p><b>Reinforces</b> – Student bring reasonable knowledge/content/skill/competency to the situation as a result of content/skill being taught and/or emphasized at some previous point in their educational career. Instructional activity continues to build upon previous competency and reinforces content/skill competency.</p>													



# *Marshall Community & Technical College*

## *Institutional Effectiveness & Outcomes Assessment*

### *IE/OA 4. ASSESSMENT MEASURES*

**Program – Degree or Certificate**

Network Systems Administration (MCSE) one-year certificate program

**Team Members**

Scott Nicholas

**Date**

5/14/04

\*For each Outcome assessment measure, designate the assessment result/level that indicates

- Student learning has exceeded standards
- Student learning has met standards
- Student learning is below standards

**Statement of Intended Outcome 1**

Students will be adequately prepared to take the following Information Technology national certification exams: CompTIA A+, Microsoft MCSA, and Microsoft MCSE

**Assessment Measure #1**

Results of CompTIA A+, Microsoft MCSA and Microsoft MCSE exams

**Statement of Intended Outcome 2**

Students will be able to deploy, monitor, administer, and optimize a network information system.

**Assessment Measure #1**

Final grades in IT-210, IT-211, IT-216, IT-217

**Assessment Measure #2**

Results of Microsoft MCSA exams

<b>Statement of Intended Outcome 3</b>	Students will utilize formal network systems engineering methodologies and techniques to analyze business requirements, and to create strategies, plans, or designs for the network information system of an entire organization, subsidiary, or division.
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**Assessment Measure #1**

Final grades in IT-222, IT-223, IT-224
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**Assessment Measure #2**

Results of Microsoft MCSE exams
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<b>Statement of Intended Outcome 4</b>	<p>Current General Education Outcomes:</p> <ul style="list-style-type: none"> <li>○ Communicate critically and effectively using listening, written, and oral skills</li> <li>○ Use mathematics for problem-solving activities</li> <li>○ Think critically and logically and remain open to examining new ideas and points of view</li> <li>○ Develop an awareness of, an appreciation for, and a commitment to ethical behaviors</li> <li>○ Appreciate the diversity of the human experience</li> <li>○ Develop decision-making skills and a commitment to lifelong learning</li> </ul>
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**Assessment Measure #1**

Students will complete a General Education Outcomes E-Portfolio.
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# MARSHALL COMMUNITY & TECHNICAL COLLEGE

## *Institutional Effectiveness & Outcomes Assessment*

### **IE/OA 5. ASSESSMENT TIMETABLE**

<b><i>Assessment Timetable Specifying Measures for Each Outcome</i></b>								
<b><i>Program Outcomes</i></b>	<b><i>2001-2002</i></b>		<b><i>2002-2003</i></b>		<b><i>2003-2004</i></b>		<b><i>2004-2005</i></b>	
	<b><i>Fall</i></b>	<b><i>Spring</i></b>	<b><i>Fall</i></b>	<b><i>Spring</i></b>	<b><i>Fall</i></b>	<b><i>Spring</i></b>	<b><i>Fall</i></b>	<b><i>Spring</i></b>
1. Students will be adequately prepared to take the following Information Technology national certification exams: <ul style="list-style-type: none"> <li>• CompTIA A+</li> <li>• Microsoft MCSA</li> <li>• Microsoft MCSE</li> </ul>							CompTIA A+ Exams, Microsoft MCSA Exams	CompTIA A+ Exams, Microsoft MCSE Exams
2. Students will be able to deploy, monitor, administer, and optimize a network information system.							IT-210 IT-211 IT-216 IT-217	
3. Students will utilize formal network systems engineering methodologies and techniques to analyze business requirements, and to create strategies, plans, or designs for the network information system of an entire organization, subsidiary, or division.								IT-222 IT-223 IT-224
4. *Current General Education Outcomes								
o Communicate effectively using written and oral skills.							IT 150	COM 111
o Apply mathematics and basic scientific concepts for problem solving activities.							IT 150	COM 111
o Utilize technology competently.							IT 150	COM 111
o Use critical thinking skills.							IT 150	COM 111
o Develop an awareness of ethical behavior.							IT 150	COM 111

# *Marshall Community & Technical College*

## **IE/OA 6. OUTCOMES ASSESSMENT TOOLS (FEEDBACK LOOP)**

An Outcomes Assessment Plan should be in accord with the College's Mission Statement, the Division's Mission Statement, and the Program's intended outcomes. Ongoing Assessment Techniques should assess the effects of the program and its services upon campus students and the workforce:

### **Marshall Community and Technical College Mission Statement**

Marshall Community and Technical College is a comprehensive student-centered college focused on teaching and learning, and responsive to changing and diverse needs.

### **Operational Vision Statement**

Marshall Community and Technical College will be learning centered, community-connected, & future focused. Marshall Community and Technical College strives to provide high-quality and relevant learning opportunities to meet the workforce, transfer, basic skills, and lifelong learning needs of the communities it serves.

### **Operational Values**

In support of our vision and mission, Marshall Community and Technical College affirms the following values:

- Learner-based education
- Broad-based and community-based partnerships
- Excellence and accountability
- Continuous program improvement
- Results-oriented decision-making.

### **Program/Option/Unit Mission Statement**

The Network Systems Administration (MCSE) one-year certificate program at Marshall Community and Technical College is dedicated to providing high quality education in Network Systems Administration and Systems Engineering, in order to prepare highly skilled personnel for rewarding careers that meet the dynamic industry needs of today's workplace.

<b>Program Outcomes Upon completion of the program, <u>What must students know?</u></b>	<b>Assessment Methods Used for Each Program Outcome</b>	<b>What standards or benchmarks (such as %) did you use?</b>	<b>How did you use the assessment results in program planning?</b>	<b>What dates were the assessment data reviewed and program/ curriculum revised?</b>
<p>Students will be adequately prepared to take the following Information Technology national certification exams:</p> <ul style="list-style-type: none"> <li>• CompTIA A+ ·</li> <li>• Microsoft MCSA·</li> <li>• Microsoft MCSE</li> </ul>	<p>Students taking these Information Technology national certification exams will achieve a passing score.</p>	<p>Student learning has met standards when 80% of the students taking Information Technology national certification exams achieve a passing score.</p>	<p>Based on tabulated data (see attached),</p>	<p><b>Data:Fall 2004 – Spring 2005</b></p> <p><b>Review: Fall, 2005</b></p> <p><b>CompTia A+ Certification Results Not Available at this time</b></p>
<p>Students will be able to deploy, monitor, administer, and optimize a network information system.</p>	<p>Students will achieve a passing score on objective and skills based exams involving the deployment, monitoring, administration, and optimization of network information systems.</p>	<p>Student learning has met standards when 80% of the students achieve passing scores on objective and skills based exams involving the deployment, monitoring, administration, and optimization of network information systems.</p>	<p>Based on tabulated data (see attached), 94% of students achieved passing scores on objective and skills based exams involving the deployment, monitoring, administration, and optimization of network information systems - Student learning has met standards.</p>	<p><b>Data:Fall 2004 – Spring 2005</b></p> <p><b>Review: Fall, 2005</b></p>
<p>Students will utilize formal network systems engineering methodologies and techniques to analyze business requirements, and to create strategies, plans, or designs for the network information system of an entire organization, subsidiary, or division.</p>	<p>Students will achieve a passing score on objective exams involving case studies requiring the students to utilize formal network systems engineering methodologies and techniques to analyze business requirements, then provide appropriate designs for the network information system of the given organization.</p>	<p>Student learning has met standards when 80% of the students achieve passing scores on objective exams involving case studies requiring the students to utilize formal network systems engineering methodologies and techniques to analyze business requirements, and then provide appropriate designs for the network information system of the given organization.</p>	<p>Based on tabulated data (see attached), 91% of students achieved passing scores on objective exams involving case studies requiring the students to utilize formal network systems engineering methodologies and techniques to analyze business requirements, then provide appropriate designs for the network information system of the given organization.</p>	<p><b>Data:Fall 2004 – Spring 2005</b></p> <p><b>Review: Fall, 2005</b></p>

<p>Current General Education Outcomes:</p> <ul style="list-style-type: none"><li>• Communication Skills Oral Written</li><li>• Quantitative Skills/Science</li><li>• Technological Skills</li><li>• Critical Thinking Skills</li><li>• Ethical Behavior Awareness</li><li>• Diversity Awareness</li></ul>	<p>Students will complete a General Education Outcomes E-Portfolio.</p>	<p>Student learning has met General Education Outcomes when E-Portfolio has been successfully completed.</p>	<p>In progress</p>	<p>In progress</p>
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<b>PROGRAM ASSESSMENT METHODS</b>	<b>Would Like To Try This X</b>	<b>Have Used This X</b>	<b>Title of Course That Assessment Method Was Used In</b>
<b>PRE-ENTRY ASSESSMENT</b>			
Application forms/Student Information		X	All IT courses
Placement Tests		X	IT210
Competencies			
Other??			
<b>MID-PROGRAM ASSESSMENT</b>			
Internship/Fieldwork Performance Review		X	IT299
Skills Proficiency Tests		X	IT120, IT210, IT211, IT216, IT217, IT219, IT221, IT222, IT223, IT224, IT270, IT276
Student Focus Groups			
Other??			
<b>END OF MAJOR ASSESSMENT</b>			
Summary Project, Paper		X	IT222, IT223
Student GPA			
Portfolios			
Competency Exam		X	IT210, IT211, IT216, IT217, IT219, IT222, IT223, IT270, IT276
Oral Presentation		X	IT222, IT223
Are students performing better/worse than predecessors on Capstone Experience? Basis for judgment?			
Exit Interview, Oral and/or Written			
Licensure/Certification Practice Tests		X	IT210, IT211, IT216, IT217, IT219, IT222, IT223
Licensure/Certification Exam Pass Rates		X	IT210, IT211, IT216, IT217, IT219, IT222, IT223, IT270, IT276
Alumni Satisfaction Survey	X		
Community Needs Assessment			
Advisory Committees and Employer Feedback		X	
Placement Effectiveness			
Employment and/or Employer Satisfaction Measures		X	
Dropout and Non-Completer Rates			
Program Demographics – # Students Beginning, # Halfway, # Completes; % Change in Completes Over Time		X	
Program Review & Specialized Accreditation		X	
Other??			

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<b>CLASSROOM ASSESSMENT METHODS</b>	<b>Would Like to Try This X</b>	<b>Have Used This X</b>	<b>Title of Course that Assessment Method Was Used In:</b>
Classroom Activities (handouts)		X	All MCSE Courses
Daily Assignments		X	All MCSE Courses
Evaluation Instruments From Other Sources		X	All MCSE Courses
Exam Evaluations			
Faculty Self-Assessment	X		
Notebooks			
Oral Presentation		X	IT222, IT223
Placement Tests			
Portfolio	X		
Pre-Test, Post-Test		X	All MCSE Courses
Prompts (Journals/Index Cards)		X	All MCSE Courses
Quizzes		X	All MCSE Courses
Student Evaluations using MCTC format		X	Every Semester
Student Focus Groups			
Student-Generated Test Questions	X		
Student Information		X	Every IT course
Student Self-Assessment		X	All MCSE Courses
Student Focus Groups	X		
Student Input – Free form oral and written		X	All Courses
Team Assessments by Students		X	IT222, IT223
Weekly Questions Drop Box	X		
Writing (Para, Essays, Reports, etc.)		X	IT299
Minute Paper (CAT)		X	All MCSE Courses
Muddiest Point (CAT)	X		All MCSE Courses
One-sentence Summary (CAT)	X		All MCSE Courses
Other CAT's			

**Fall 2004 - Spring 2005 Class Data**

<b>Course Numbers</b>	<b>Grade of A</b>	<b>Grade of B</b>	<b>Grade of C</b>	<b>Grade of D</b>	<b>Grade of F</b>
IT-210	55%	28%	10%	7%	0%
IT-211	59%	17%	14%	10%	0%
IT-216	69%	17%	10%	0%	4%
IT-217	76%	7%	14%	0%	3%
IT-219	59%	10%	14%	17%	0%
IT-222	45%	28%	24%	3%	0%
IT-223	62%	21%	10%	4%	3%
<b>Averaged Scores</b>	61%	18%	14%	6%	1%
<b>MCSA Course Averages</b>	65%	17%	12%	4%	2%
<b>MCSE Course Averages</b>	55%	20%	16%	8%	1%
% A+ Certified	Unknown	Unknown	Unknown	Unknown	Unknown
% MCSA Certified	10%				
% MCSE Certified	80%				
<b>Total Certified Students</b>	90%				