

# *Marshall Community & Technical College*

## *Institutional Effectiveness & Outcome Assessment*

### *IE/OA Tool Kit*

Program-Degree or Certificate

A. A. S. in Information Technology – Program Developer Option

---

Steps

Date  
Completed

- |    |   |                |
|----|---|----------------|
| 1. | Program Mission Statement   | <u>5-14-04</u> |
| 2. | Statements of Intended Outcome  | <u>5-14-04</u> |
| 3. | Curriculum Audit  | <u>5-14-04</u> |
| 4. | Assessment Measures   | <u>5-14-04</u> |
| 5. | Assessment Timetable  | <u>5-14-04</u> |
| 6. | Outcomes Assessment Tool (Feedback Loop)  | <u>9-6-05</u>  |
| 7. | Resources Requested for Program Improvement (use space provided below)  | <u>9-6-05</u>  |
|    | <div style="border: 1px solid black; padding: 5px;">Funds for instructor training in VisualBASIC.Net programming code.</div>    |                |
| 8. | New Directions Recommended for Program (IE Program Expansion, New Workforce Focus, etc.) (use space provided below)             | <u>9-6-05</u>  |
|    | <div style="border: 1px solid black; padding: 5px;">Development of GIS/GPS option in Business and Information Technology.</div> |                |

# *Marshall Community & Technical College*

## *Institutional Effectiveness & Outcomes Assessment*

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

Program-Degree or Certificate

A. A. S. in Information Technology – Program  
Developer Option

---

**Program or Department Name**

Information Technology

**Team Members**

Rhonda Scragg

**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 Program Developer Option at Marshall Community and Technical College is dedicated to providing high quality education in computer programming and software development in order to produce 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**

**A.A. S. in Information Technology – Program Developer Option**

#### **Team Members**

Rhonda Scragg

#### **Date**

5/14/04

#### **Program Mission Statement**

The Program Developer Option at Marshall Community and Technical College is dedicated to providing high quality education in computer programming and software development in order to produce 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 industry certification exams: CompTIA's A+, Microsoft Office Specialist (EXCEL), and CIW.

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

Students will demonstrate professional competencies in oral and written communications, mathematics, acceptable IT practices, and work ethics.

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

Students will be able to competently install, configure, build, upgrade, troubleshoot, and repair personal computer compatible hardware.

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

Students will demonstrate knowledge and skills in Internet basics, web design, Internet security and legal issues involving the Internet.

#### **STATEMENT OF INTENDED OUTCOME 5**

Students will demonstrate skills in locating, organizing, manipulating, filtering, and presenting information through the utilization of a programming language.

#### **STATEMENT OF INTENDED OUTCOME 6**

**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.

**STATEMENT OF INTENDED OUTCOME 7**

--

# Marshall Community & Technical College

## Institutional Effectiveness & Outcomes Assessment

### IE/OA 3. CURRICULUM AUDIT

<b>Curriculum Audit Grid*</b>																					
<b>Program Degree or Title</b>		Information Technology – Program Developer Option						<b>Courses</b>													
<b>Intended Outcomes</b>		COM 111	IT 101	IT 107	IT 120	MAT 145	COM 112	IT 115	IT 150	IT 221	IT 270	COM 231	IT 212	IT 230	IT 250	IT 276	MAT 215	IT 215	IT 240	IT 242	SS 201
1.	Students will be adequately prepared to take the following industry certification exams: CompTIA's A+, Microsoft Office Specialist (EXCEL), and CIW		I	I	E				E	I	E		E	R	I	E			R	E	
2.	Students will demonstrate professional competencies in oral and written communications, mathematics, acceptable IT practices, and work ethics.	E	E	R	R	E	E	R	R	R	R	E	R	R	R	R	E	R	R	R	E
3.	Students will be able to competently install, configure, build, upgrade, troubleshoot, and repair personal computer compatible hardware.		I	R	E					R	E			R		E					
4.	Students will demonstrate knowledge and skills in Internet basics, web design, Internet security and legal issues involving the Internet		I	E	R								E						R	E	
5.	Students will demonstrate skills in locating, organizing, manipulating, filtering, and presenting information through the utilization of a programming language.							I											E		
6.	<b>*Current General Education Outcomes</b>																				
	○ Communicate critically and effectively using listening, written, and oral skills	E	R	R	R	R	E	R	R	R	R	E	R	R	R	R	E	R	R	R	R
	○ Use mathematics for problem-solving activities		R	R	R	E		R	R	R	R		R	R	R	R	E	R			

<ul style="list-style-type: none"> <li>○ Think critically and logically and remain open to examining new ideas and points of view</li> </ul>	E	R	R	R	E	E	R	R	R	R	E	R	R	R	R	R	R		R	E
<ul style="list-style-type: none"> <li>○ Develop an awareness and appreciation of and a commitment to ethical behaviors</li> </ul>	E	R	R	R	R	E	R	R	R	R	E	R	R	R	R	R	R		R	E
<ul style="list-style-type: none"> <li>○ Appreciate the diversity of the human experience</li> </ul>	E	R	R		R	E				R	E						R		R	E
<ul style="list-style-type: none"> <li>○ Develop decision-making skills and a commitment to lifelong learning</li> </ul>	E	R	R	R	E	E	R	R	R	R	E	R	R	R	R	R	R	R	R	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**

A. A. S. in Information Technology – Program Developer Option

#### **Team Members**

Rhonda Scragg

#### **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 industry certification exams: CompTIA's A+, Microsoft Office Specialist (EXCEL), and CIW

#### **Assessment Measure #1**

Results of CompTIA's A+ certification exam(s).

#### **Assessment Measure #2**

Results of Microsoft Office Specialist (EXCEL) certification exam(s).

#### **Assessment Measure #3**

Results of Certified Internet Webmaster (CIW) certification exam(s).

#### **Statement of Intended Outcome 2**

Students will demonstrate professional competencies in oral and written communications, mathematics, acceptable IT practices, and work ethics.

#### **Assessment Measure #1**

Supervisor's evaluation at internship site.

#### **Assessment Measure #2**

Employer Satisfaction Survey.

**Assessment Measure #3**

Final grades in COM 111, COM 112, COM 231, MAT 145, and MAT 215

**Statement of Intended Outcome 3** Students will be able to competently install, configure, build, upgrade, troubleshoot, and repair personal computer compatible hardware.

**Assessment Measure #1**

Final grade in IT 270 and IT 276

**Assessment Measure #2**

Results of CompTIA's A+ certification exam(s).

**Assessment Measure #3**

Supervisor's evaluation at internship site.

**Statement of Intended Outcome 4** Students will demonstrate knowledge and skills in Internet basics, web design, Internet security and legal issues involving the Internet.

**Assessment Measure #1**

Final grades in IT 107, IT 212, and IT 242.

**Assessment Measure #2**

Results of Certified Internet Webmaster (CIW) certification exam(s).

--

**Assessment Measure #3**

--

**Statement of Intended Outcome 5** Students will demonstrate skills in locating, organizing, manipulating, filtering, and presenting information through the utilization of a programming language.

**Assessment Measure #1**

Final grades in IT 115 and IT 215

**Assessment Measure #2**

Supervisor's evaluation at internship site.

**Assessment Measure #3**

**Statement of Intended Outcome 6** Current General Education Outcomes

- Communicate critically and effectively using listening, written, and oral skills
- Use mathematics for problem-solving activities
- Think critically and logically and remain open to examining new ideas and points of view
- Develop an awareness and appreciation of and a commitment to ethical behaviors
- Appreciate the diversity of the human experience
- Develop decision-making skills and a commitment to lifelong learning

**Assessment Measure #1**

Supervisor's evaluation at internship site.

**Assessment Measure #2**

Employer survey.

**Assessment Measure #3**



**Statement of Intended Outcome 7**

**Assessment Measure #1**

**Assessment Measure #2**

**Assessment Measure #3**



<ul style="list-style-type: none"><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></ul>								
<ul style="list-style-type: none"><li>○ Develop an awareness and appreciation of and a commitment to ethical behaviors</li></ul>								
<ul style="list-style-type: none"><li>○ Appreciate the diversity of the human experience</li></ul>								
<ul style="list-style-type: none"><li>○ Develop decision-making skills and a commitment to lifelong learning</li></ul>								

# *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 Mission Statement**

**The Information Technology (IT) program of the Marshall Community & Technical College is committed to the principle that each student can be empowered through education. The mission of the IT program is to provide the student with proactive and innovative academic experiences and learning opportunities that increase the state-of-the-market knowledge and technical skills required for employability and promotability in today's global workforce. Due to the constantly-evolving nature of the IT field, the student will develop a commitment to life-long learning and an appreciation for diversity.**

#### **Option Mission Statement**

The Program Developer Option at Marshall Community and Technical College is dedicated to providing high quality education in computer programming and software development in order to produce highly skilled personnel for rewarding careers that meet the dynamic industry needs of today's workplace.

Program/Option/Unit Outcomes Upon completion of the program/option/service, <u>What must students/servers know?</u>	Assessment Methods Used for Each Program/Option/Unit Outcome	What standards or benchmarks (such as %) did you use?	How did you use the assessment results in program/option/unit planning?	What dates were the assessment data reviewed and program/ curriculum/service revised?
Servers and Workstations - The student will install and maintain user workstations with industry standard desktop operating systems according to organizational needs.	Given objective and skills based exams, 80% of students will be able to competently install, configure, build, upgrade, troubleshoot, and repair personal computer compatible hardware achieving a minimum score of 78%. IT120, IT270.  80% of student interns and internship sponsors will report confidence in the intern's overall ability to install and maintain user workstations with industry standard desktop operating systems according to organizational needs.	Passage of CompTIA's A+ Exam  Minimum average of 78% on work in classroom  Successful completion of 240 hours in an IT job. Input from supervisor of IT job.		
		For Assessment Method 3, see Rhonda Scragg for Spring 2005 data.	I am developing an Intern and Intern Sponsor Survey for the interns that will be used in the Fall 2005 semester.	
Information Assurance – The student will maintain security applications to assure confidentiality, integrity, and availability of information systems resources according to organizational needs.	Given objective and skills based exams, 80% of students will be able to competently develop VisualBASIC code to ensure integrity and reliability of information.	Twenty students were given a fictitious company and had to write code to calculate payroll. Eighteen students (90%)		
Current General Education Outcomes: <ul style="list-style-type: none"> <li>• Communication Skills <ul style="list-style-type: none"> <li>Oral</li> <li>Written</li> </ul> </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>	80% of student interns and internship sponsors will report confidence in the intern's overall ability to <ul style="list-style-type: none"> <li>• Communicate critically and effectively using both written and oral skills.</li> <li>• Use mathematics and basic scientific concepts for problem solving activities.</li> <li>• Become competent users of technology.</li> <li>• Think critically and be open to</li> </ul>	For Assessment Method 3, see Rhonda Scragg for Spring 2005 data	I am developing an Intern and Intern Sponsor Survey specifically for the Network Systems Security interns that will be used in the Fall 2005 semester.	Fall 2005

	<p>examining new ideas.</p> <ul style="list-style-type: none"><li>• Develop an awareness of and a commitment to ethical behavior.</li><li>• Appreciate the diversity of the human experience</li><li>• Develop decision making skills and values for lifelong learning.</li></ul>			
--	---	--	--	--

<b>PROGRAM ASSESSMENT METHODS</b>	<b>Would Like To Try This</b>	<b>Have Used This</b>	<b>Title of Course That Assessment Method Was Used In</b>
<b>PRE-ENTRY ASSESSMENT</b>	<b>X</b>	<b>X</b>	
Application forms/Student Information		X	All IT courses
Placement Tests			
Competencies			
Other??			
<b>MID-PROGRAM ASSESSMENT</b>			
Internship/Fieldwork Performance Review		X	IT 299
Skills Proficiency Tests		X	IT 115, IT120, IT 212, IT 270, IT 276
Student Focus Groups			
Other??			
<b>END OF MAJOR ASSESSMENT</b>			
Summary Project, Paper		X	IT 115, IT 150
Student GPA			
Portfolios		X	IT 299
Competency Exam			
Oral Presentation	X	X	IT 101, IT 115, IT 1T 150, IT 299
Are students performing better/worse than predecessors on Capstone Experience? Basis for judgment?			Better - Anecdotal data Microsoft and CISCO Academics have increased technical skills and knowledge
Exit Interview, Oral and/or Written			
Licensure/Certification Practice Tests			
Licensure/Certification Exam Pass Rates			
Alumni Satisfaction Survey			
Community Needs Assessment			
Advisory Committees and Employer Feedback		X	IT 299
Placement Effectiveness			
Employment and/or Employer Satisfaction Measures		X	IT 299
Dropout and Non-Completer Rates			
Program Demographics – # Students Beginning, # Halfway, # Completes; % Change in Completes Over Time			
Program Review & Specialized Accreditation		X	
Other??			

<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 IT Courses
Daily Assignments		X	All IT Courses
Evaluation Instruments From Other Sources			
Exam Evaluations		X	All IT Courses
Faculty Self-Assessment	X		
Notebooks			
Oral Presentation		X	IT 115, IT 150, IT 299
Placement Tests			
Portfolio		X	IT 299
Pre-Test, Post-Test			
Prompts (Journals/Index Cards)			
Quizzes			
Student Evaluations using MCTC format		X	All IT Courses
Student Focus Groups			
Student-Generated Test Questions			
Student Information		X	Every IT course
Student Self-Assessment			
Student Focus Groups			
Student Input – Free form oral and written		X	All IT Courses
Team Assessments by Students			
Weekly Questions Drop Box	X		
Writing (Para, Essays, Reports, etc.)		X	IT299
Minute Paper (CAT)			
Muddiest Point (CAT)			
One-sentence Summary (CAT)		X	All IT Courses
Other CAT's			