Management Information Systems

5-Year Program Review

March, 2014

Submitted by Dr. Linda Davis

History of the Program

During the 1980's William Woods College had a Computer Science and Computer Information Systems (CIS) program. At some point prior to 1990, the Computer Science program was dropped. Computer Information Systems continued to be the sole computer program in the Business and Economics department. The program involved programming, systems analysis, program applications, networking, and project management at the introductory and advanced levels. In 2004, after discussion with CIS advisory board and advice from the Regional meetings, it was decided to move to a Management Information Systems program. It was decided CIS students lacked business knowledge. A core of business classes complimented the already strong computer technology component of the program. The change comes out of local and regional meetings noting the need for graduates to have some business sense along with the technology.

See Appendix A for detailed history of the MIS program

Philosophy and Purpose

Prepare students for careers involving the technological design, analysis, implementation and operation of information systems involving strong business concepts and applications. The program will continued to evolve its curriculum to prepare students for the challenges they will face in information technology and business. This program prides itself on preparing the whole individual ethically, mentally and academically for the career path with a focus on life-long learning.

The Minor and Concentration in MIS allow a tremendous amount of flexibility beyond the required core. Students in various majors can mold these programs to better suit their respective careers.

Section 1: Student Data

A: Demographics Chart

Chart 1A: 1

	2008-2009	2009-2010	2010-2011	2011-2012	2012-1013
Declared Major	13	23	21	28	24
Declared Minor	5	11	9	13	15

Chart 1A: 2

	2008-2009	2009-2010	2010-2011	2011-2012	2012-1013
Entering Freshman	2	3	6	4	0
Incoming Transfers	0	3	3	4	5
Graduating Seniors (retention# so those w began in your program	NA	NA	NA	5	0
On line enrollment	NA	NA	NA	NA	NA

Reflection on the Demographic Data:

The data above continue to show a low number of entering freshmen and transfers in comparison to the final major count. Conclusion is based on the fact it is difficult to recruit students into a program that is often misunderstood. Management Information Systems is still a relatively new field and yet unknown like the traditional majors Thus most students shift from other majors into the department. Trends continue to show growth in the program since it began and with current data from the Bureau of Labor statistics show a continued growth in this field. The goal of the program is to continue a strong growth while maintaining quality students. With the University's focus on technology and quality majors, we believe it will continue to maintain and grow at a steady rate. The job market has already begun to open up and we predict our numbers will grow based on current market needs.

B: Placement Numbers Chart 1B: 1

	2008-2009	2009-2010	2010-2011	2011-2012	2012-1013
Number of Graduates (Total Graduates)	4	8	9	7	6
Employed Within Field	4	6	9	5	4
Employed Outside of Field	0	2	0	1	0
Graduate School	0	0	0	1	0
Not known	0	0	0	0	2

The field of MIS is wide and varied. A large majority of our students go into Website programming and development. In addition, "in the field" would include Business Analysts, Application Developers, Systems Analysts, Database Administrators, Network Assistants, Technical Support Specialist, Usability Specialist, and various other business-related fields.

C. Courses (chart)

- **Courses required for your major**

Principles of Accounting I
Accounting Information Systems
Entrepreneurship
Personal Finance
Business Communications
Technical Writing
Introduction to Web 2.0
Productivity Tools
Database Management Systems
Networks and Telecommunications
Website Development
Project Management
MIS Experience
Internship
Enterprise Collaboration Software
Systems Analysis
Management Information Systems Capstone

Courses Required for the **Minor:**

MIS 100	Introduction to Web 2.0	3 hours
MIS 1225	Productivity Tools	3 hours
MIS xxx	MIS Electives	12 hours

Courses Required for the **Concentration**

BUS 324 Personal Finance	3
MIS 125 Productivity Tools	3
MIS 250 Telecommunications & Networks	3
MIS 325 Website Development	3

Course rotation schedule

	F	S	F	S	F	S	F	S
MIS 100 Intro to Web 2.0		X		X		X		X
MIS 125 Productivity Tools	X	X	X	X	X	X	X	X
MIS 225 Database Management Systems	X		X		X		X	
MIS 250 Networks and Telecommunications	X	X	X	X	X	X	X	X
MIS 325 Website Development	X	X	X	X	X	X	X	X
MIS 350 Project Management	X		X		X		X	
MIS 425 Enterprise Collaboration systems		X		X		X		X
MIS 450 Systems Analysis		X		X		X		X
MIS 475 Management Information Systems Capstone	X		X		X		X	

Internships, MIS 370 Project, Tutorials, Independent Study classes offered every semester, summer, intersession
MIS 100 Intro to Web 2.0 and MIS 125 Productivity Tools offered every summer

Enrollment:

Course	Year 2010-2011	Year 2011-2012	Year 2012-2013	Year 2013-2014
MIS 100 Intro to Web 2.0	FALL (8/18) SPRING (2/18)	FALL N/A SPRING (16/18)	FALL N/A SPRING (20/21)	FALL N/A SPRING (20/20)
MIS 125 Productivity Tools	FALL (12/18) SPRING (34/36)	FALL (30/36) SPRING (36/36)	FALL (34/36) SPRING (41/40)	FALL (22/40) SPRING (39/45)
MIS 225 Database Management Systems	FALL N/A SPRING (12/18)	FALL (7/18) SPRING (7/20)	FALL (12/20) SPRING (10/20)	FALL (7/20) SPRING (7/20)
MIS 250 Tele Communication & Networking	FALL (13/18) SPRING N/A	FALL (8/18) SPRING N/A	FALL (18/18) SPRING N/A	FALL (13/18) SPRING N/A
MIS 325 Website Development	FALL (13/18) SPRING N/A	FALL (9/18) SPRING (13/18)	FALL (25/36) SPRING (18/18)	FALL (21/36) SPRING (18/18)
MIS 350 Project Management	FALL (17/18) SPRING N/A	FALL (9/18) SPRING N/A	FALL (9/18) SPRING N/A	FALL (14/18) SPRING N/A
MIS 370 MIS Experience	FALL N/A SPRING N/A	FALL N/A SPRING N/A	FALL (5/36) SPRING (7/72)	FALL (5/72) SPRING (22/54)
MIS 401 Internship I	FALL N/A SPRING N/A	FALL (1/1) SPRING N/A	FALL N/A SPRING N/A	FALL N/A SPRING N/A
MIS 403 Internship III	FALL (3/3) SPRING (3/3)	FALL (2/2) SPRING (3/3)	FALL (1/1) SPRING (0/1)	FALL N/A SPRING (1/1)
MIS 406 Internship IV	FALL N/A SPRING N/A	FALL N/A SPRING N/A	FALL N/A SPRING N/A	FALL N/A SPRING (3/3)
MIS 412 Internship XII	FALL N/A SPRING (1/1)	FALL N/A SPRING N/A	FALL N/A SPRING (1/1)	FALL (1/1) SPRING N/A
MIS 425Enterprise Collaboration Software	FALL N/A SPRING (9/18)	FALL N/A SPRING (8/20)	FALL N/A SPRING (8/20)	FALL (1/1) SPRING (10/20)
MIS 450 Systems Analysis & Design	FALL N/A SPRING N/A	FALL N/A SPRING (13/20)	FALL N/A SPRING (9/20)	FALL N/A SPRING (9/20)
Business Component				
ACC 240 Accounting I	FALL (29/30) SPRING (3/3)	FALL (59/60) SPRING N/A	FALL (56/60) SPRING N/A	FALL (54/60) SPRING (20/20)
ACC412 Accounting Information Systems	FALL N/A SPRING (17/25)	FALL N/A SPRING (13/25)	FALL N/A SPRING (21/25)	FALL N/A SPRING (16/25)
BUS 206 Entrepreneurship	FALL (58/60) SPRING (60/60)	FALL (85/90) SPRING (81/90)	FALL (60/60) SPRING (62/90)	FALL (78/90) SPRING (60/90)
BUS 332 Business Communications	FALL (17/20) SPRING (31/50)	FALL (19/30) SPRING (34/40)	FALL (38/40) SPRING (37/40)	FALL (29/40) SPRING (18/20)
BUS 324 Personal Finance	FALL (16/30) SPRING N/A	FALL (18/30) SPRING N/A	FALL (27/30) SPRING N/A	FALL (43/90) SPRING N/A
ENG 302 Technical Writing	FALL N/A SPRING N/A	FALL (5/20) SRPING N/A	FALL N/A SPRING N/A	FALL (11/20) SPRING N/A
Capstone				
MIS 475 Management Information System/Capstone	FALL N/A SPRING (24/30)	FALL (6/18) SPRING N/A	FALL (8/18) SPRING N/A	FALL (9/19) SPRING N/A

On line rotation of courses

MIS 125	Productivity Tools	Online every semester (2 sections) and summer (2 sections
MIS 100	Introduction to Web 2.0	Online every Spring

Identify **courses that support other major programs** each year (on campus, cohort, or on line).

Chart 1C: 2

Course offered	Supported Programs
MIS 100	Business Admin
MIS 125	Accounting Sport Management Equestrian Administration Equine General Studies Business Admin
MIS 200	Business admin
MIS 225	Business Admin
MIS250	Business Admin
MIS 300	Business Admin
MIS 325	Graphic Design Sport Management Business Admin

The MIS program believes in supporting all majors on campus. There are usually about 5-8% of students in the MIS classes that take the course as an elective. Whether the student sees the value on their own, or they are encouraged by their advisors, we continue to see growth. Over the years, the number of majors requiring MIS classes has grown. While adequate staffing is currently available, the University should keep in mind the current growth would lend itself to adding an additional faculty member to manage this growth.

At the current time, the MIS program has continued to add sections and summer sessions as needed. As noted above, if this growth continues, an additional faculty member may be necessary.

Section 2. Faculty and Resources

A. Physical Facilities

- Most of the MIS technology classes are held in Burton 206 Computer Lab. The lab is equipped with 20 zero clients/non-persistent desktops. The software includes Microsoft Office, OneNote, Silverlight, QuickTime, Skype, QuickBooks, Sybase, various browsers and other unique programs. There is also a dedicated Networking lab equipped with networking hardware/software /servers etc. In addition, there is a Certification Lab on the main floor of the Business Division. Students also have access to the "Think Tank" a group-work room equipped with 3 computers and 55" monitors. Currently a dedicated student computer lab is being developed. The Student Website Advancement Team room was obtained on a grant and completed in 2012. t has 5 computers, a large 55" projection monitor, 2 Usability machines. It is the only student - managed business on

campus. Clients work with the students as they design, develop and maintain websites. A Usability Testing lab was completed in 2012 to test the navigation effectiveness of client sites. This is one of the only undergraduate Usability Testing lab in the state of Missouri

2013-14

- Zero clients in Burton Lab 206 & SWAT
- Think Tank - student group study technology room
- Student Test makeup room

2012-13

a. Usability Testing Lab created
b. Certification lab completed

2011-12 a. Student Website Advancement Team business started

B. Library Holdings

William Woods University - Dulany Library

COLLECTION ANALYSIS

March 2014

In Support of the Following Academic Program: Management Information Systems

I. **MOBIUS Holdings** (Subject Search):

Management information systems – 3,139 catalog entries

Dashboards (Management information systems) – 45 catalog entries

Data warehousing – 489 catalog entries

Decision support systems – 406 catalog entries

Enterprise resource management – 25 catalog entries

II. **William Woods University Holdings**:

Woods OneSearch

Academic Journal Articles – 245,037

Magazine Articles – 83,982

News Articles – 12,263

E-books – 10,008

Reviews – 1,750

Trade publications – 80,612

Reports – 5,830

Dissertations/Theses – 1,671

Books, Visual Materials, Electronic Books

By Publication Date

Subject	Totals	1960-1969	1970-1979	1980-1989	1990-1999	2000-2004	2005-2009	2010	2011	2012	2013	2014	Undefined
Computer Science Totals	730	11	20	140	294	132	95	7	6	3	5	5	12
Office Automation	72	0	6	9	18	25	12	0	0	0	0	1	1
Cybernetics	47	6	2	16	13	5	5	0	0	0	0	0	0
Computer Science - General	98	5	8	30	30	8	12	0	2	0	0	0	3
Computers, General	49	0	3	14	22	4	4	0	1	0	1	0	0
Online Data Processing	9	0	0	0	5	1	3	0	0	0	0	0	0
Computer Programming & Programming Languages	52	0	0	22	20	7	2	1	0	0	0	0	0
Computer Software	99	0	0	6	54	21	9	0	2	2	2	1	2

Subject	Totals	1960-1969	1970-1979	1980-1989	1990-1999	2000-2004	2005-2009	2010	2011	2012	2013	2014	Undefined
Special Computers & Systems	34	0	0	15	12	2	1	3	0	0	0	0	1
Special Topics in Computer Science	117	0	0	16	56	25	15	0	1	1	1	1	1
Machine Theory, Abstract Automata	2	0	0	0	2	0	0	0	0	0	0	0	0
Management Information Systems	12	0	1	2	5	2	2	0	0	0	0	0	0
Optical Data Processing	16	0	0	3	7	1	3	1	0	0	0	0	1
Computer Networks	123	0	0	7	50	31	27	2	0	0	1	2	3

By Format

Subject	Totals	Books	Computer Files	Sound Recordings	Serial Publications	Internet Resources	Visual Materials
Computer Science Totals	730	432	2	1	10	276	9
Office Automation	72	39	1	0	2	30	0
Cybernetics	47	27	0	0	0	20	0
Computer Science - General	98	43	0	1	0	54	0
Computers, General	49	27	0	0	1	21	0
Online Data Processing	9	6	0	0	0	3	0
Computer Programming & Programming Languages	52	36	1	0	0	15	0

Subject	Totals	Books	Computer Files	Sound Recordings	Serial Publications	Internet Resources	Visual Materials
Computer Software	99	78	0	0	1	18	2
Special Computers & Systems	34	12	0	0	3	19	0
Special Topics in Computer Science	117	69	0	0	1	47	0
Machine Theory, Abstract Automata	2	1	0	0	0	1	0
Management Information Systems	12	7	0	0	0	5	0
Optical Data Processing	16	3	0	0	0	13	0
Computer Networks	123	84	0	0	2	30	7

C. Faculty

- Present full-time faculty teaching specifically for this program.
- Adjuncts for the program: taught within the last 3 years for the program
- Designated faculty for a concentration if possible.

Chart 2C: 1

Name of Faculty	***Highest Degree Earned (Concentration)***	***Degree Granting Institution***	***Years Full-time Teaching in Higher Ed***	***Contracted Course Load***
Dr. Linda Davis	PhD Information Science & Technology	University of Missouri	24	24/yr
Mr. Murphy Tetley	MA in Education	University of Missouri	24	24/yr
Keith Speer	MBA	William Woods University	3 yr. part time	Adjunct
Brenda McDermon	EDS	University of Missouri	8 yr. part time	Adjunct

Over the years, the number of majors which require MIS classes has grown. While adequate staffing is currently available, the University should keep in mind the current growth would lend itself to adding an additional faculty member to manage this growth. At the current time, the MIS program has continued to add sections and summer sessions as needed. As noted above, if this growth continues, an additional faculty member may be necessary.

Current faculty are qualified to teach in the program.

The administration currently is receptive to the needs of staffing and program requirements.

D. Internship Experiences

- Students are required to obtain a required 3 credit hour internship (120 hours in the work place/in the field. Many elect to do more credit hour than the minimum. Students must go through an approval process for each internship. The internship director requires the student submit a weekly journal of their work activity. Three supervisor evaluations assessing the students' performance are sent throughout the internship. At the completion of the internship, the student submit a final paper, an agency evaluation and a resume with internships appropriately inserted.

Section 3: Financial Analysis of Program

Program	Total Cost (personnel, budget and special expenses)	Total Program Income (course fees, tickets)	Number of Majors (2013)	Cost Per Major
MIS	$ 131,340	$4965.00	33	$3,829

- The demographic data differ on "number of majors" from chart 1 as the data was pulled on different dates.

Chart 3A: 1

Additional expenses related to instruction.

Annual subscription Webhosting for Web Development class	$150.00
MSDNAA subscription/annually	$100.00

Misc. Software/Hardware for Student Web Class/business	$300.00
Misc. Software and Hardware for MIS classes	$300.00
Certification Lab requirements (software)	$100.00

Section 4: Objectives and Assessment

PROGRAM ASSESSMENT

Management Information Systems Degree Program
Burton Building
William Woods University

Fulton, MO 65251

Submitted

By

Dr. Linda Davis

June 2013

PROFILE

Number of majors: 29

Number of Minors 21

Concentrations (Approximately 16)
Service to other majors (See below)

Number of faculty: 2 full-time 0 part-time

The MIS department has grown tremendously in the last 4 years. The department continues to service a large number of majors, minors and concentration. In addition, many departments on campus now require MIS courses to complete their requirements.. This increase is partly due to the department trying to educate students about what MIS entails. The department continues to grow at a steady pace and the job outlook is excellent (See ***Job Outlook*** information below) for majors. Thus, it is expected the major will continue to grow in the future. 100% of the graduates were placed in jobs upon graduation during the 2012 May and 2012 December semesters. As of May 2013, 90% of the current majors have found jobs in their field. Considering slow job growth around the nation, job placement of our majors has been a positive factor in keeping pace. Predicting the program needs of students is becoming a challenge as jobs change with industry, business requirements and economic conditions.

The number of majors, minors and concentrations has been on the rise as students explore options within the new Management Information Systems program. As other departments require computer courses in their degree programs, the MIS department may be required to reassess the number of faculty offering courses. At the current time only 2 full time faculty offer the computer core within the MIS program. Five other majors on campus require students to take courses in the MIS department. This allows us to service large numbers of students but caution must be taken in making sure as programs across campus grow and add computer requirements, that our department is able to handle the added strain on department resources.

Servicing other majors/programs on campus. (as of 2012)

Major/Program	Numbers being served in program	Hours required of MIS courses
Business Administration	89	3
Sports Management	23	6
Equine Management	21	6
Accounting	18	3
MIS Majors	29	48
MIS Minors	15	18
MIS Concentration	12	12

PROGRAM OBJECTIVES

Upon completion of the program, the student will:

Fundamental Concepts of Information and Computer Technology

Goal:

1. Use a personal computer with end-user software to solve problems within the organization.

Target Objectives:

1. Understand the basic hardware and software components of a personal computer system.
2. Understand and use the basic operating system of a personal computer.
3. Be able to utilize end-user software in the three areas of word processing, spreadsheet and data base applications.
4. Understand the ethical usage of computers and computer software.
5. Describe approaches for transferring data among applications including OLE, importing/exporting, conversion, and alternate methods

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Information Systems Concepts

Goal:

2. Identify managerial/organizational needs and the role of information systems in solving those needs using current professional practices and methodologies.

Target Objectives:

1. Identify different types of information systems.

2. Understand the importance of information to the organization, and be able to differentiate between information and raw data.
3. Identify the unique role of users, managers, and the information systems professional in the development of organizational solutions.
4. Understand the expanding role of telecommunications technology.

Computer Concepts

Goal:

3. Describe the function and architecture of computer hardware and software.

Target Objectives:

1. Understand the basic elements of logic design and switching theory.
2. Understand internal machine representations of data and the mapping to logical structures.
3. Understand internal machine representations of instructions and instruction processing.
4. Understand the basic components of computer software, including operating systems.

Application Development

Goal:

4. Use current professional methodologies to solve and implement organizational problems of limited complexity.

Target Objectives:

1. Understand and use structured, top-down programming design criteria to solve application problems.
2. Implement those solutions using a current, procedural programming language.
3. Use new application development methods involving fourth generation tools.
4. Understand the integration of individual application systems into the overall organizational information system.

Systems Development

Goal:

5. Use information systems methodologies to solve organizational problems.

Target Objectives:

1. Understand and apply the systems development life cycle.
2. Understand and apply database management methodologies.
3. Design and implement a limited multi-user system.
4. Demonstrate project management skills.
5. Describe system security and its implementation.

Management of Information Systems

Goal:

6. Demonstrate a comprehension of the principles and concepts involved in the management of organizational information systems resources.

Target Objectives:

1. Describe the function of information systems management at the operational, tactical, and strategic levels.
2. Describe the organizational impact of information systems.
3. Describe emerging technologies and issues.
4. Define the ethical issues surrounding the use of information systems.

Networking

Goal:

7. Describe and apply skills in network administration.

Target Objectives

1. Explain the steps in analyzing and configuring a telecommunication system, including specific hardware and software components.
2. Explain the purpose of modems, bridges, gateways, hubs, and routers in interconnecting systems.
3. Identify hardware and software requirements and approximate costs of centralized and distributed systems.
4. Discuss and explain risks, security and privacy in alternate system configurations.

Systems Project

Goal:

8. Develop a solution to a real-life problem as a program capstone.

Target Objectives:

1. Develop a multi-user system with audit controls.
2. Apply project management techniques.
3. Develop user and system documentation.
4. Use accepted testing strategies.
5. Plan implementation and auditing.

9. Demonstrate ability to manage electronic commerce-related projects.

Target Objectives

1. Identify effective uses of eCommerce tools.
2. Identify criteria for evaluating financial and eCommerce information.
3. Evaluate the advantages and disadvantages of various technologies for particular eCommerce objectives

4. Identify ways Internet technologies may affect business in general and eCommerce.
5. Create an eBusiness Plan and eCommerce structure.
6. Understand issues related to credit cards, tax, shipping, and security.
7. Identify methods to attract customers and market an eCommerce site.
8. Evaluate the advantages and disadvantages of eCommerce solutions, including renting a service provider or building a solution.

The Remaining Courses Offered Under The MIS Degree Are Taught And Assessed By Business Faculty And Ultimately Follow Their Assessment Procedures:

Acc240 Accounting I
Acc412 Accounting Information Sys
Bus206 Entrepreneurship
Bus214 Business Ethics
Bus332 Business Communications
Bus351 Principles Of Management
Ecn252 Microeconomics

Course	Obj.1	Obj.2	Obj.3	Obj.4	Obj.5	Obj.6	Obj.7	Obj.8
124	X			X	X			X
301					X		X	X
304		X			X			X
325				X				X
327		X	X	X				X
350			X	X				X
390	X				X		X	X
434				X	X	X		X
460	X			X				X

Management Information Systems

MAJOR/MINOR ASSESSMENT

"Closing the Loop"

Review of Recommended Actions and their results

June 2013

Program Objective	Method of Measurement	Criteria for and Threshold Level of Success	Results/Outcomes (Include data)	Recommendation for Action From 11-12 report	Program Changes Based on Assessment Data Closing the Loop 2012-2013	Assessment Days Data Collection	Budget / Support
1. Use a personal computer with end-user software to solve problems within the organization.	Production Rubric used to assess projects, production work and final project.	70% of students will perform at satisfactory 7 on 10 point scale or better on departmental end of course projects.	87% of students performed at 7 point scale or better on department end of course projects.	Current system is strong and continues to yield results expected.	**None**	**Programming and operating systems are the 2 low points on the IC3 exam.**	**Because a small department is limited on resources, it is suggested we obtain training modules for the various weak areas.**
	SimNet Assessment	70% of students will perform at 75% level on SimNet or better	75% of students score 75% or better on SimNet	Students performing good on SimNet assessment.	**None**	**Incorporating more operating systems units and programming would help.**	
	IC3 National Certification Exam-Application section of assessment	75% of students will obtain a score of 75% or better on key application section of IC3 exam	10% of students scored below the 75% score on at least 1 of the 4 sections of the Key Applications Section of the IC3 exam	Continue to try to implement Operating Systems into the program since it is the low mark on the national IC3 assessment.	**Department implemented more operating system exercises to increase IC3 scores from previous year.**		**Obtain traning modules (i.e. LearningTree) which will teach/train and assess student learning in programming areas.**
	Student-End of year evaluation of Program.		Average score overall: 83.6 Weak Areas: Operating Systems		**Instead of writing the IC3 national exam into the budget, we are assessing the fee to the students (since they are the beneficiaries of the certification).** **The update was completed and allows for 3 testers.**		
				Write the national certification exam costs into the department budget	**Although we incorporated 3 mini-units of programming languages, students still express a need for more on the programming skills when tasked with interviews (although normally MIS degrees do not include programming languages)**		**Consider working in a "PRE" IC3 exam for incoming majors in order to measure true growth.**

				The IC3 lab be updated to accommodate more than 1 testing station. Students continue to indicate on year end survey that many jobs they were seeking required a level of programming-			
2. Identify managerial/ organizational needs and the role of information systems in solving those needs using current professional practices and methodologies.	Rubric Assessment of final project Employer survey of class project	80% of students score 8 out of 10 on rubric assessment of project. Employer Survey: 80% of the employers will indicate that the student is good or very good in their ability to manage information technology in the workplace.	83 % of students scored 8 or above on rubric assessment. 100 % of employers indicated students were at good or very good in ability to manage information technology in workplace.	None	**Feel client-student relationship is high. However, we did have a few challenges with clients and have implemented new procedures into the class to address these challenges so they do not occur again.**	**Visiting clients onsite would help students understand the various projects we face**	**Travel budget for client visites**
3. Describe the function and architecture of computer hardware and software.	IC3 National Certification exam – Section: Computing Fundamentals – Hardware Section	70% of students will perform at 75% (passing) or better on IC3 exam.	90% of students scored above 75% mark – 10% scored below the 75% mark (which is failing in terms of acquiring a certificate for the IC3 National Certification exam	None	**This was the first year to have a 'fail' rate. However, we note the students who failed had the opportunity to retake the exam (free) but chose not to. We feel this would have helped their chances of a 'pass' rate.**		
4. Use current information systems methodologies to solve and implement organizational problems of limited complexity.	Rubric Assessment of final project Employer monthly evaluation of students on internship	70% of students will perform score of 7 on 10 point rubric scale for project assignment. Employer Survey: 80% of the employers will indicate that the students are good or very good in their ability solve organizational problems.	85 % of those completing final projects scores 8 or better on 10 point scale. 100% of employers surveyed felt interns were able to solve organizational problems in a timely manner	Incorporated mid-term evaluation by employer in order to best maximize student performance.	**The midterm evaluation was implemented and allowed students to redirect their focus on areas marked "below average" – and raised the overall final evaluation scores.**		
5. Apply programming theory to solving business problems	IC3 Key Applications – Program Functions assessment score	70% of students will perform score 75% or higher on Program Functions section of IC3	OF those taking IC3 – 10% scored below 75% mark – with the average score higher than last year	Although we recognize programming is our weak area, we were able to provide additional mini units this year in the programming area. Implement .Net Programming into Advanced Web apps class and also encourage independent advanced projects using different programming tools	**As suggested, we implemented a programming unit into the Advanced Website Development Course (INet + , Java, XHMTL). We need to identify those who want to focus their careers in this area and direct Advanced Projects and Internships into their career paths.**	**Need additional training in these areas.** **MIS Advisory board suggested business partnerships** **Implement training modules. Having 1 instructor**	**Obtain training modules which help teach, train and assess students in various programming modules.**

						teach several languages in not effective	
Develop a solution to a real-life problem as a program capstone.	Capstone Project Three-Rubric assessment: 1) Peer Group Eval 2) Peer Portfolio Assessment Rubric 3) Instructor Rubric Employer survey of client-related capstone project SWAT Employer Surveys.	80% of students score 3/4 Peer Group score 8/10 Peer Rubric score 9/10Instructor Rubric Score Team will score at least 8 out of 10 on project rubric	Peer Group - 190 % scored 4 or above 80% scored 9 or above 90% scored 9 or above on Instructor Rubric Team scored 9/10 on project rubric by employer.	Continue to implement real-world projects such as: 1. Capstone project with real client 2. SWAT – student run business with clients. 3. Advanced Projects monitored by professor.	**Due to our previous recommendations, "solutions to real-life problems" are our strength. Talking with employers who hire our students, they continue to applaud our efforts in this area.** SWAT – showing tremendous growth. 13 students	**MIS Advisory board suggested business partnerships** **Students continue to note on surveys the need for real-world work outside the classroom.** **Implementing more client contacts would greatly improve this area.**	**Include budget for instructors to travel to various sites for client partnerships** **Need to implement a paid faculty position for SWAT**
7. Demonstrate a comprehension of the principles and concepts involved in the management of organizational information systems resources.	IC3 Standard Living Online – Section Analysis score	80% of students will perform at 75% or better on IC3 Section Analysis Section.	85% of students performed at this level or better in the "Online Section" of the Analysis part of the IC3.	None	**None**		
8. Describe and apply skills in network administration.	IC3 – Living Online –Network section score	80% of students will perform at 70% or better on IC3 networking section	79% of student scored 70% or better.	Need to incorporate more book learning in order to fill gaps the project does not address.	**Continue to find exercises to address this area.**	**Implement LearningTree – a module based training / assessment tool**	**Purchase LearningTree – a module based training / assessment tool**
9. Demonstrate ability to manage electronic commerce-related projects.	Project Rubric of final e-commerce project Client rubric of student developed e-commerce website.	80% of students will 7 on 10 point scale. Employer Survey: 80% of the employers will give a score of 7 or better on 10 point scale (average score)	80% of students scored 7 or above on 10 point scale. No employer survey given this year since clients were not used in the class projects..	None	**None**	**Continue to implement Wordpress**	**Obtain an additional license to increase domain support**

Management Information Systems
ASSESSMENT Day
Analysis of Data

Internet and Computing Core National Certification Exam

The MIS department has analyzed the data from the IC3 exam and found the following:

90% of the MIS Seniors passed all 3 sections of the IC3 and are nationally certified.

The two weakest sections of the exam were

- Living Online
- Computing Fundamentals

Strongest area

- Key Applications

With those areas noted as weaker areas, these skills sets were noted:

Computing Fundamentals –

- Identify how to change system settings and install and remove software
- Identify what an operating system is, how it works and how one is maintained
- Identify Network fundamentals, and network computing benefits and risks

Living Online

- Identify different types of online communication and how they work
- Identify the ethical uses and the risks of using computers
- Identify how software is developed, and how software and hardware work together.

Although Computer Applications was the strongest area, these 2 subsets were the weakest:

- Performing Mail Merge - Word
- Be able to perform document review and collaboration – Word
- Create and manage Queries – Access

Advisory Board Recommendations

Continue to require internships – consider a 2nd experience/internship in order to broaden student knowledge
Consider adding some programming (even though most MIS programs do not)
Consider job shadowing in order to give students a feel for the market options
Consider partnering more with businesses for real-world projects
Consider budgeting for online tools that would enhance a small program for more options

Program Changes Based on Assessment

12-13 Results of recommendation

This was the first year we implemented a 7 panel advisory board (total of 13 members on the board) They were instrumental in helping us mold and revise our current curriculum based on market trends.

We have incorporated a more formal process for review before the IC3 exam. This allows the students the opportunity to focus on areas that have not been covered recently.

The new updated IC3 National Certification lab was expanded to 3 stations and new IC3 software.

SWAT (Student Website Advancement Team) incorporated the new Usability Testing and Human Factors lab and ran 4 separate usability tests for clients. This has been a huge benefit to employment opportunities since Usability is a growing area in the job market. In addition, SWAT has tripled in size over the last 3 years – and opened up to all majors on campus (not just MIS majors). It has experienced some challenges with such growth which are now being addressed.

Midterm evaluations by clients has helped us address issues mid-steam, thus helping to raise our overall satisfaction by the end of projects.

We wrote the certification costs into the student's lab fee. Since the student is the ultimate benefactor of the certification, we felt this was fair. However, we still need to look at implementing a pre IC3 exam in order to truly measure the student's growth.

Program Changes Based on Assessment

12-13 Results of recommendation

The department has moved away from utilizing exam grades and course assignments as a sole measure of assessment. Currently, the department has implemented rubric assessment and is moving toward having all rubric assessments and artifacts on a comprehensive portal by end of 2014.

In addition, 80% of the major coursework now requires a final project which is assessed using the rubric method. 40% of those courses incorporate an outside client for work produced. Client evaluations are now incorporated into the assessment procedures for those classes.

The continuation of utilizing the IC3 (Internet and Computing Core) national certification exam as a final assessment of student learning continues to help show the department where weaknesses and strengths exist has added tremendous benefit to the program. In addition, many students went above and beyond to obtain a second certification. Last year the cost of the certification was written into the course as a lab fee. Ideally, this exam should be given to incoming majors and then again prior to graduation. However, the cost prohibits the process at this time.

SimNet – another nationally normed assessment tool – has also been incorporated into the program to assess application knowledge and as a pre/post assessment measurement tool.

Program Changes Based on Assessment Results

Write the IC3 National Certification Exam costs into department budget (since it will be discontinued under the Assessment division. **(Completed)**

Complete the upgrade of the Certification lab to allow more than 1 tester at a time. Upgrade hardware (currently old hardware that runs slow) (**completed – 3 stations now available**)

Incorporate .Net Programming into the Advanced Website Class in order to strengthen the Programming portion of the program. **(Completed – 3 week mini unit)**

Encourage Advanced Projects containing some level of programming or networking – since these were areas of weakness. **(Completed)**

Consider incorporating more Service Learning and assessment into other classes. (Need to add a component to each class)

Continue with projects such as SWAT which help students transfer theory into practice **(Completed SWAT continues to grow in membership and client-base--New Usability testing lab now in place and tied to client-base of 3-4 projects/year.)**

Management Information Systems

Report for Enrollment Services

May 2013

I. Department Strengths

One faculty member is a full tenured Ph.D. in the field of Information Technology. She possess two additional computer certifications. She has won the Distinguished Professor award, Governor's award and TA Abbott award. The other full time faculty was a former Information Technology business owner and brings a variety of skills to the department from the outside world. Both have done computer consulting work which brings a real-world perspective to the classroom. Both work extensively with the Graduate and Adult Studies program teaching, mentoring, and assessing that program.

Last year, the department received a grant to implement a new student work area.

Required Internships (of 120 hours) have helped students land jobs. Most employers note this was a major factor in hiring the student.

SWAT (Student Website Advancement Team) – This select group continues to add value to the department by supplying students with real world experience in a student-managed Website business. SWAT has a newly created Usability Testing lab. The SWAT organization is a client-based student run business.

This year the department expanded its certification lab by to help manage the IC3 certification exam schedule by students. Although it is nothing fancy, it does add promise to utilizing this type of assessment in the future.

Job Growth for MIS managers is excellent (See Job Outlook in this report page).

The department is able to service many other majors on campus that require computer courses.

Three classes now incorporate a strong Service Learning component into the classes.

II. **Competitive Advantages** As always, the small class size is a huge advantage especially when dealing with individual attention to the student, projects and hands-on assignments. Our department works extensively on student projects as opposed to final exams that require comprehension of theory and facts. Students in the website development and e-commerce classes are required to select business clients and design, develop and upload to the Internet real websites. The networking class has a small lab that allows students hands-on experiences with networking in a real-lab situation. All students are now required to do a 120 hour internship related to the field of study (many students elect to do a longer internship). A student-managed business – SWAT (Student Website Advancement Team) is operational and currently works with the University team in maintaining the University website along with taking outside clients for website development. Students are responsible for creating, managing, and revising University websites for departments on campus. This gives students the opportunity to manage a small business. In addition, students have the opportunity to be part of the student-managed coffee shop that was

designed and developed by students in the Business Division. Once again, this will allow students an opportunity to apply the classroom theory to a real business management approach.

Presently, the department has instituted a new assessment procedure called SimNet. This is a nationally-normed application assessment. In addition, students are required at the end of the program to take the IC3 – Internet and Core Computing national certification exam. This tests students at a national level on their computing, Internet and core computing skills. At the present time, 85% of the graduates in the program have passed the exam.

III. **Student Numbers** – The MIS department has experienced tremendous growth over the last 4 ½ years among majors, minors and concentrations. The MIS department services many other departments on campus– thus it is difficult to predict the number of majors that can be serviced since we service other growing departments at the same time. Our computer lab will allow 18 students at any one time, assuming direct hands-on instruction is needed with the computers. We predict approximately 35 majors could be serviced effectively while managing the other majors that feed into the MIS program as part of their requirements. Currently there are 29.

Job Outlook

Source: U.S. Bureau of Labor Statistics, Employment Projections program

Employment of computer and information systems managers is projected grow 18 percent from 2010 to 2020, about as fast as the average for all occupations.

Growth will be driven by organizations upgrading their information technology (IT) systems and switching to newer, faster, and more mobile networks. Consequently, more employees at all management levels will be needed to help in the transition.

Additional growth will likely result from the need to increase security in IT departments. More attention is being directed at cyber threats, a trend that is expected to increase over the next decade.

A number of jobs in this occupation is expected to be created in the healthcare industry, which is far behind in its use of information technology. This industry is expected to greatly increase IT use, resulting in job growth.

An increase in cloud computing may shift some IT services to computer systems design and related services firms, concentrating jobs in that industry.

A number of IT jobs are at risk of being sent to other countries with lower wages, dampening some employment growth. However, this risk may be reduced by a recent trend of firms moving jobs to lower cost regions of the United States instead of to other countries.

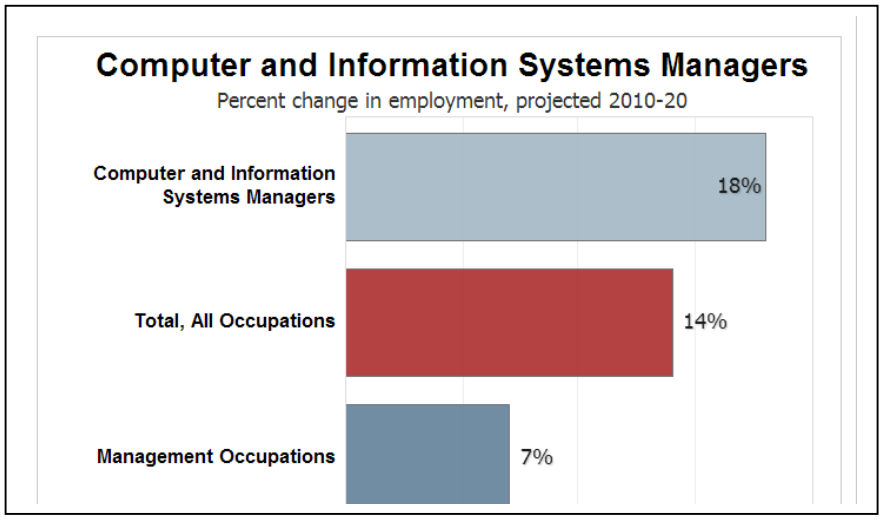
Job Prospects

Prospects should be favorable for this occupation. Many companies note that it is difficult to find qualified applicants for positions. Because innovation is fast paced in IT, opportunities should be best for those who have knowledge of the newest technology.

Employment projections data for computer and information systems managers, 2010-20

Occupational Title	SOC Code	Employment, 2010	Projected Employment, 2020	Change, 2010-20		Employment by Industry
				Percent	Numeric	
Computer and Information Systems Managers	11-3021	307,900	363,700	18	55,800	[XLS]

SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program



Section 5: External Review

- Attach External Review Report
- Every program review must include consultation with external reviewers unless accredited by a national association. If the program is accredited, the name of the accreditation agency and schedule for the accreditation process must be included.

Section 6: Conclusions and Recommendations

- Faculty response of outside program review.
- Provide academic recommendations to the Academic Council concerning the program content.
- Implementation Plan of Academic Council recommendations.
  (Any recommendation requiring an increase or request for more money outside of the regular budget needs to have a detailed proposal with supporting data for evidence on the need with specific costs associated that can be submitted at the next budget cycle.)

APPENDIX A – Detailed History

1991, October, Business, Economics and Computer studies developed an Advisory Council which met yearly to discuss current trends in the field.

1993, WWU receives a five-year Title III grant totaling approximately $1.2 million from the U.S. Department of Education for "Strengthening Institutions. "Funds were used to strengthen academic quality through technological support by providing more computers, computer labs and technological upgrades.

1993, a Degree program for adults in Computer Information Management is introduced.

1994 – Department revises curriculum and changes title to Computer Information Science to reflect inclusion of more advanced programming classes.

1995 – Title III proposal for student labs and portable electronic classroom approved.

1997 – Major program review completed on the program. Justification for continued need for the program is completed. Growth in CIS continues to show promise for graduates.

2004 - Undergraduate major in Management Information Science replaces the Computer Information Systems program. A core of business classes compliments the already strong computer technology component of the program. The change comes out of regional meetings noting the need for graduates to have some business sense along with the technology.

2006 the department changes program to Management Information Systems. The strong business core of classes continues to compliment the technology component.

Since 2004, the Management Information Systems department has thrived. Annual growth has been increasing consistently for 10 years. Job placement for graduates is high - normally at 100% placement within the first year after graduation. Required internships have added a commitment to real-world knowledge integration. A heavy emphasis on project-based learning continues to lend strong portfolios upon graduation.