Web Analyst Subcommittee Meeting
July 7, 2010 @ 8:30am
Meeting minutes

Attendance:
1. Leslie Fife
2. Laura Goadrich
3. Keith Hanson
4. Chris Rondeau
5. Eddy Smith

Topics:

1. Introductions
2. Division Merger
   a. Effective the fall semester, the academic area will align the computer Information systems courses within the Division of Cyber Information Technology. This realignment affords the opportunity of interfacing similar subject matter more closely for enhanced delivery of academic services to students.
   b. The Division of Cyber Information Technology is now responsible for all Cyber Information Technology, Computer Information System, Computer Web Design and Management Information System courses.
3. Current Course requirements- review of current courses in the Web Analyst degree program included in the attachment1
4. Strengths and weakness of current course load
5. Open discussion points:
   a. Keith mentioned the need to add C# in the degree program versus our current C+ curriculum.
   b. Keith mentioned the connection of C programming and gaming along with the increased need for Ajax programmers
   c. Keith mentioned the need for web programmers to understand “standards compliant” and semantic mark-up languages, i.e. Zen Garden must understand CSS. There is a focus on HTML interactive markups and HTML5
   d. Leslie mentioned the coding compliance site importance for IE, Safari, and Firefox
   e. There are new certifications for mySQL and postSQL
   f. Keith mentioned that there are many PH jobs and there is a certification
   g. Group consensus that CWD 150 is a good class, but need to be stronger.
   h. With three database courses, there is a need to update and ensure that the courses are distinct. ASP.NET is a good skill to have for job opportunities like Wal-Mart in Bentonville.
   i. Suggestion to include a networking course as an elective option
   j. Recommendation to include CWD 160 as a programming elective
6. Courses to add or remove from the program - final conclusions
   • CIS 102 - Be sure that we are using both Alice and Python
   • CIS 117 - OK with adjustment to Programming Elective
- CWD 130 - OK with beefing up to cover 130 and 230 content. Be sure to talk about code compliance, potential cert for ACA Dreamweaver.
- CIS 209 - REWORK. Look into SQL/Orcle.SQL Light/ PostScript SQL or something along those lines (it was noted to use a REAL Db) Could possibly map to MS SQL Cert
- CIS 217 - OK to become CIT/CWD/CIS Elective
- CWD 150 - OK to beef up with 150 and 155 content. Be sure to look at covering: Objects, Memory Leaks, JStyle, JQuery. Also look into Prototype. Be sure to cover call backs, and passes.
- CWD 170 - OK to adjust to Networking course (maybe CIT 101)
- CWD 230 - Leave as Web Design II but use as advanced topic course (Scripting/CSS/HTML5)
- CIT 151 – KEEP
- CWD 270 - go with PHP and Ruby also look at with ORMs
- It was advised to look at creating a C# course
- Look at removing CWD 155

7. Review and vote on changes- changes approved unanimously.

Also mentioned: Web Sockets, Db Normalization, Model View Controller Framework, Action Script 3 (Action Scripts are used in Flash).

**Attachment 1: Web analyst degree program**

**Required courses for Associate of Applied Science in Web Analyst Programmer adjusted with discussion from subcommittee meeting:**

**Freshman Year**

**First Semester**

CIS 102: Problem Solving and Programming Techniques - 3 Hours
CIS 105: Computer Concepts – 3 Hours
ENGL 101: Composition & Rhetoric I – 3 Hours
MATH 102: College Algebra – 3 Hours
PHSC 105: Elemental Physics – 3 Hours
**Total Hours: 15**

**Second Semester**

CIS 115: Software Applications – 3 Hours
CIS 117: Introduction to Visual Basic – 3 Hours
CIS, CWD, CIT Programming Elective - CIS 113, CIS 117, CIT 160, CIT 161, CWD 160, CIT 101 – 3 Hours
CWD 130: Web Design I – 3 Hours
SPCH 110: Principles of Speech – 3 Hours
**Humanities Elective – 3 Hours**
**Total Hours: 15**
Sophomore Year

Third Semester

**CIS 209**: Advanced MS Access – 3 Hours
**CIS 217**: Visual Basic II – 3 Hours
**CIT 150**: Introduction to Java Programming – 3 Hours
**CWD 150**: Web Scripting I, Includes CWD 155 content – 3 Hours
**CWD 170**: Database Interactions I – 3 Hours
**CWD 230**: Website Design II – 3 Hours

Total Hours: 18

Fourth Semester

**CIT 151**: Advanced Java Programming – 3 Hours
**CIT 235**: Web Application Development – 3 Hours
**CIT 270**: Relational Database Coding – 3 Hours
**CIT 294**: Web-Analyst Internship – 3 Hours
**Behavioral/Social Science Elective**: – 3 Hours

Total Hours: 15

Total credit hours: 63

Attachments 2: Course descriptions for CIT, CWD, CIS classes in the degree program.

**Computer Information Systems (CIS)**

**099**: Keyboarding. (3-3-0)
*Prerequisite: none*
Development of keyboarding techniques on a microcomputer; introduction to basic computer skills and word processing; designed for students with no formal computer training.

**102**: Problem Solving and Programming Techniques. (3-3-0)
*Prerequisite: none*
A language-independent introduction to program development using various problem solving techniques. Emphasis is placed on problem analysis, algorithm and pseudocode development, as well as various data and control structures. Both structured programming and object oriented programming are discussed.

**105**: Computer Concepts. (3-3-0)
*Prerequisite: CIS 099 or equivalent typing skill.*
Introductory concepts in word processing, electronic spreadsheet, database, and presentation software.

**113**: Introduction to C++ Programming. (3-3-0) Fall only
*Prerequisite: CIS 102.
An introduction to the C++ programming language. Student will develop programs using I/O, decision, and looping statements.

**114**: Microsoft Windows. (3-3-0)
*Prerequisite: CIS 105.*
An introduction to current operating systems and networking environments. The class is conducted in a laboratory setting where hands-on learning is emphasized.

115: **Software Applications.** (3-3-0)

Prerequisite: *CIS 105.*

The course covers intermediate concepts in word processing, electronic spreadsheets, database, and presentation software.

117: **Introduction to Visual BASIC.** (3-3-0) Spring only

Prerequisite: *CIS 102.*

An introduction to event-driven programming. This course is intended to introduce students to the Visual BASIC programming language and to reinforce the skills developed in CIS 102. Specific techniques discussed include programming style, user interface design, coding, debugging, and documentation skills.

205: **Advanced MS Word.** (3-3-0)

Prerequisite: *CIS 115.*

Using Microsoft Word, students will expand their word/information processing concepts utilizing software based on modern office settings. The course includes advanced formatting, merging, sorting, and inputting of letters, memos, reports, and tables. Students will also collaborate to create web pages.

207: **Advanced MS Excel.** (3-3-0)

Prerequisite: *CIS 115.*

Using Microsoft EXCEL spreadsheet software, students will expand on the correct and efficient design techniques necessary for the creation of practical, accurate spreadsheets. Formulas for data manipulation, report preparations, business graphic development, and macros will also be covered. Advanced techniques will also be covered such as pivot tables, what if analysis, and web file incorporation.

209: **Advanced MS Access.** (3-3-0)

Prerequisite: *CIS 115.*

Database design concepts, working and querying databases, creating forms, customizing reports and integrating Access with other programs will be explored in depth. Students will also be introduced to techniques of creating hyperlinks to other MS Office programs.

210: **Advanced MS PowerPoint.** (3-3-0)

Prerequisite: *CIS 115.*

An in-depth exposure to presentation design (presently Microsoft PowerPoint). The course includes how to plan, define, create, and modify presentations. Practical applications of integration of other documents will also be incorporated.

213: **Advanced C++ Programming.** (3-3-0) Spring only

Prerequisite: *CIS 113.*

A continuation of the C++ programming language. Students will develop programs involving arrays, data files, functions, and string manipulations.

217: **Visual BASIC II.** (3-3-0) Fall only

Prerequisite: *CIS 117.*

A continuation of CIS 117. Course begins with a quick review of CIS 117 and progresses to discussion of random access files, database access, and variable arrays. The majority of the
course focuses on custom application development that brings together skills developed in the first course in the sequence. Students will use Visual Basic to design and create a custom program having "real world applicability."

227: Computer System Design. (3-3-0)
Prerequisite: CIS 115.
An in-depth study of information systems with an emphasis on "real world" situations.

250: Beginning Networking. (3-3-0)
Prerequisite: CIS 114 or instructor’s permission.
Introduction to basic networking using network environment such as Windows NT or Novell Netware. Students will learn basic network administration and use of files, directories, printing, e-mail, and updating and sharing of data. Students will work on actual network.

Cyber Information Technology (CIT)
101: Network Essentials. (3-3-0)
Prerequisite: none
Develop fundamental networking skills including an understanding of network hardware, installation, security and troubleshooting in a corporate environment. Through classroom and hands-on activities, learn how computers exchange information and how the Internet functions. In addition, this class will help students gain the skills required for the nationally recognized CompTIA Network+ certification exam.

110: Help Desk Tools and Techniques. (3-3-0)
Prerequisite: none
Explores the customer service roles and responsibilities of an IT support professional. Examines the support software options for tracking and managing data: log, track, and escalate calls; resolve problems using a knowledge base. Covers documentation/reporting tools, asset management, hotline support, performance reports, trends, and career resources.

112: Support of Emerging Technologies. (3-3-0)
Prerequisite: none
This course prepares students to take the CompTIA A+ and Microsoft Certified Professional exams.

115: Network Defense. (3-3-0)
Prerequisite: CIT 101
Introduction to concepts, principles, and techniques of methodologies that are used to attack a network.

120: Network Routing and Switching. (3-3-0)
Prerequisite: CIT 101
Introduction to Networking basics with a focus on network terminology, protocols, local area networks (LANs), wide area networks (WANs), Open System Interconnection (OSI) model, cabling, routers and router programming, Ethernet, Internet Protocol (IP) addressing, and network standards. The student will develop skills on configuring a router, using the Cisco IOS Software, configuring routing protocols and configuring Access Control Lists (ACLs) to control access to the router.
121:
CCNA I. (4-4-0)
Prerequisite: CIT 101
Develop networking skills based on the Cisco Certified Network Associate (CCNA) curriculum by introducing students to the Cisco Networking Academy Program. The course focuses on the following: Network terminology, Network protocols, Local-area networks (LANs), Wide-area networks (WANs), Open System Interconnection (OSI) model, Cabling, Cabling tools, Routers, Router programming, Ethernet, Internet Protocol (IP) addressing, Network standards. In addition, the course provides instruction and training in the proper care, maintenance, and use of networking software, tools, and equipment.

122:
CCNA II. (4-4-0)
Prerequisite: CIT 121
Develop networking skills based on the Cisco Certified Network Associate (CCNA) curriculum by introducing students to the Cisco Networking Academy Program. architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. Recognize and correct common routing issues and problems.

140:
Mainframe Operations. (3-3-0) Fall only
Prerequisite: CIT 101
Covers information required to work with IBM’s mainframe computers.

150:
Introduction to Programming with JAVA. (3-3-0) Spring only
Prerequisite: CIS 102
An introduction to programming and object-oriented design concepts using the Java programming language. Students learn all the Java programming basics and use a simple text editor as a development environment. Design concepts and programming tools will be integrated with an emphasis on practical business solutions.

151:
Advanced Java Programming. (3-3-0) Fall only
Prerequisite: CIT 150
This course is a continuation of CIT150. The course begins with a quick review of CIT150 and progresses to discuss advance object-oriented programming concepts using the Java. In this course students learn about arrays, implementing classes and class members, class relationships, and GUI Programming.

160:
COBOL Programming I. (3-3-0) Spring only
Prerequisite: CIS 102
Introduces fundamentals and techniques of the structured computer programming development process in a mainframe environment. This includes planning and organizing the work, coding, testing, problem solving and documenting. COBOL is the language used for programming assignments. This rigorous course requires extensive work outside the classroom.

161:
COBOL Programming II. (3-3-0) Fall only
Prerequisite: CIT 160
Advanced aspects of COBOL programming.

170:
Microsoft Windows Server. (3-3-0)
Prerequisite: CIT 101
Implementation and use of Windows to build and maintain an operating system.
172: Linux Server. (3-3-0)  
Prerequisite: CIT 101  
Implementation and use of Linux to build and maintain an operating system.

174: Novell Server. (3-3-0)  
Prerequisite: CIT 101  
Implementation and use of Novell to build and maintain an operating system.

190: Help Desk Internship. (3-3-0)  
Prerequisite: permission of instructor  
Provides on-the-job Help Desk environment work experience with instructor supervision in area companies. By consent of instructor, a special project may be substituted for the internship.

210: Advanced Network Topics. (3-3-0)  
Prerequisite: CIT 101  
Explores current topics in networks.

220: Managing Firewalls. (3-3-0)  
Prerequisite: CIT 101  
The student will learn methods of configuring and implementing the latest security devices for defending a network. Topics include firewall appliances and software. Class will focus on advanced network security processes and procedures.

225: Network Security Design. (3-3-0)  
Corequisite: CIT 280  
Design, plan, and execute vulnerability analysis of networks.

235: Web Application Development (3-3-0)  
Prerequisite: CIS 217  
This course covers the basics of developing dynamic web application using Microsoft ASP.NET. By the end of this course, students will be able to design, code, test and debug web applications using ASP.net.

240: Virtual Private Networks. (3-3-0)  
Prerequisite: CIT 220  
The student will learn methods of configuring and implementing the latest security devices for defending a network. Topics include firewall appliances and software. Class will focus on advanced network security processes and procedures.

270: Relational Database Coding. (3-3-0)  
Prerequisite: CIS 117  
This course covers the fundamentals of database management systems, in particular relational database systems. The course also teaches students how to use SQL to create, maintain, store, retrieve, and manipulate data.

280: Computer Forensics. (3-3-0)  
Prerequisite: CWD 280  
Corequisite: CIT 225  
Presents the preservation, identification, extraction, documentation, and interpretation of computer data. Examines available forensic hardware and software tools.
282: IT Project Management. (3-3-0)
*Prerequisite: CIT 101*
This course introduces the concept of managing computer information systems projects. Use of a project management tool will help students develop written and oral skills in project development, project management, and technical documentation. Planning methods and graphical techniques such as Gantt charts will be some of the tools utilized. Human resources management including team development and user training is an integral component of the course.

291: Systems Administration Specialist Internship. (3-3-0)
*Prerequisite: permission of instructor*
Real world experience at companies that maintain and manage computer networks.

292: Network Specialist Internship. (3-3-0)
*Prerequisite: permission of instructor*
Real world experience at companies that maintain and manage computer networks.

293: Network Security Internship. (3-3-0)
*Prerequisite: permission of instructor*
Real world experience at companies that maintain and manage secure computer networks.

294: Web Analyst/Programmer Internship. (3-3-0)
*Prerequisite: permission of instructor*
Real world experience at companies which employ Web Analyst/Programmers.

299: Program/Analyst Internship. (3-3-0)
*Prerequisite: permission of instructor*
Real world experience at companies which employ programmer/analyst.

**Computer Web Design (CWD)**

111: Internet Technology I. (3-3-0)
*Corequisite: CIS 105.*
This course provides the framework for learning how to access the Internet and World Wide Web and use them for a variety of tasks including communication, finding information and research, and publishing on the Web. It is designed for people who are interested in learning how to best use software tools, services, and resources currently available on the Web. This course will also introduce basic HTML coding. Emphasis will be placed on networked computers, Internet design, protocols, software, HTML, etc.

130: Website Design I. (3-3-0)
*Prerequisite: CIS 105 or CIT 101*
*Software REQUIRED: Dreamweaver*
An introduction to web fundamentals and web page layout using a WYSIWYG editor (Macromedia Dreamweaver). Students will develop web sites that will include inter- and intradocument links, color and graphics, document and image formatting, and sound and video. A hands-on approach will be used throughout this course so that the students can "learn-by-doing." At the end of the course, the student will have a solid understanding of how the different components of a Dreamweaver fit together and will have used all of the key tools to integrate all of his/her learning into a series of creative exercises.
Designing Web Interfaces. (3-3-0)  
*Prerequisite: CWD 130.*  
The student will be introduced to the skills that will enable them to build interfaces that users want and that will maximize their productivity. The course will expose students to content planning, information management, authoring techniques, user interface design, web navigation, web multimedia, and multimedia databases.  

150:  
Web Scripting I. (3-3-0) *Fall*  
*Corequisite: CWD 130.*  
This course has been designed to teach students how to use JavaScript. It will acquaint students with the proper procedure to create dynamic web pages suitable for professional purposes and personal use. They will be taught how to integrate JavaScript and HTML.  

155:  
Web Scripting II. (3-3-0) *Spring*  
*Prerequisite: CWD 150.*  
When students complete this course, they will have a firm knowledge and understanding of web programming and will be able to develop a wide variety of applications.  

160:  
Introduction to Flash. (3-3-0)  
*Prerequisite: CIS 105 or CIT 101*  
*Software REQUIRED: Flash*  
This course will encompass the fundamentals of drawing, animation, and the use of Action Scripting in Flash to create dynamic and interactive media. A hands-on approach will be used throughout this course so that the students can "learn-by-doing." At the end of the course, the student will have a solid understanding of how the different components of a Flash movie fit together and will have used the key tools to integrate all of his/her learning into a series of creative exercises.  

170:  
Database Interactions I. (3-3-0) *Fall*  
*Prerequisite: CWD 130, CIS 209, CIS 113, or CIS 117.*  
The purpose of this course is to familiarize students with a different approach for creating web pages that process HTML forms and interact with a database. Students will learn how to create web pages that interact with an Access database using the following technologies: client-side scripts; using VBScript; server-sided scripts; using Active Server Pages; compiled server programs; using the CGI protocol in Visual Basic programs; and using HTML Dynamic Link Libraries written in Visual Basic.  

210:  
CGI/Perl Programming. (3-3-0) *Fall*  
*Prerequisite: CWD 130 or CIS 102.*  
This course will introduce the student to script writing for the Internet via CGI using the programming language Perl as the scripting language. The basics of Perl will be presented, including language elements such as arrays and hash variables, looping structures, cookies, client pull/server push, control flow, functions, built-in operators, as well as the concepts of event driven programming and server side processing of HTML forms. Students will learn to create web-based forms and program the associated CGI scripts to construct dynamic, interactive websites.  

230:  
Website Design II. (3-3-0) *Spring*  
*Prerequisite: CWD 130.*  
*Software REQUIRED: Dreamweaver*  
Students learn to add functionality, animation, and interactivity to both HTML and dynamic web
pages. Students will learn to incorporate elements such as sound, graphics, animation, forms, and tables. Students will also be introduced to cascading style sheets, and JavaScript. A hands-on approach will be used throughout this course so that the students can "learn-by-doing."

240:  
**Web Graphics I. (3-3-0)**  
*Corequisite: CWD 130 or instructor’s permission.*  
*Software REQUIRED: Fireworks*  
Students will learn to create icons, animated images, text and 3-D effects, and various web based graphic elements along with interlacing, transparent backgrounds, color palettes, animation, and image maps. Students will learn to retouch photographs, correctly size images, and load web pages.

270:  
**Database Interactions II. (3-3-0) Spring**  
*Prerequisite: CWD 170.*  
This course is a continuation of Database Interactions I and will apply the knowledge gained in the prerequisite course. Students will create comprehensive database-driven websites as practical implementations of the prerequisite material.

280:  
**Information Assurance. (3-3-0)**  
*Prerequisite: CWD 270 or CIT 101.*  
This course is an introduction to the field of Information Assurance (Security). Various kinds of threats that might be faced by an information system and the security techniques used to fight them are covered. Hacker methods, viruses, worms, bombs, and system vulnerabilities are described with respect to the actions that must be taken by a Network Manager to thwart them. Existing and planned protection methods and defenses are mapped to the information system threats and attacks. This course provides the background for those individuals who seek skills in the areas of Network and Data Security.

295:  
**Internship/Final Project. (2-2-0)**  
*Prerequisite: Instructor’s Permission.*  
Students will be placed with pre-qualified businesses selected for their ability to offer a broadrange of web development and design experiences formulated to augment coursework experiences gained by the students. The businesses will be selected for their ability to help students both apply knowledge gained throughout their studies and to complete their final web project.