

# SMAB Report Fall 2009-10

## Computer Science Department

### ***Department Activities***

1. The department was successful in delivering Fundamentals of Computer Science in such a way as to allow for general education credit in critical reasoning for non-majors as well as providing a good foundation course in computer science for majors.
2. The department is now running programming competitions for McMurry students and has plans to extend the competition to area high school students.
3. The department is working on creating a database to collect and monitor collected data for program assessment.

### ***Faculty Members***

#### **Dr. Alicia Wyatt:**

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##### **Awards:**

- Received the Exemplary Service Award, McMurry University, 2008-2009 for her work in collecting, managing, and publishing over 3500 files supporting McMurry's compliance documentation for SACS.

##### **Activities:**

- Continues to serve the Moodle.org community as a moderator for two databases accepting contributions from the global community.
- Manages several WordPress blogging sites for McMurry entities: McMurry Prays, School of Natural and Computational Sciences, Biomedical Science Program, Jay-Rollins Library, and the School of Business.

##### **Presentations:**

- "YouTube, TeacherTube, and Moodle". MoodleMoot Oklahoma. Metro Technology Centers, Oklahoma City, June 11-12, 2008.
- "Managing the Walled Garden: Moodle and FERPA". MoodleMoot Oklahoma. Metro Technology Centers, Oklahoma City, June 11-12, 2008.

##### **Current research interests:**

- Pilot program for Pre-Professional programs using Mahara, an open source e-portfolio system with social networking features.
- Developing a Professional Learning Environment (PLE) with social networking features (The results should be the basis for a keynote address at the Oklahoma MoodleMoot next June.)

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- FERPA compliance and web 2.0 technology use with University students.

(Note: Dr. Wyatt has returned from a difficult year of chemotherapy, surgery, and sabbatical. She is glad to be back and will serve as Acting Dean of the School of Natural and Computational Sciences for the Spring 2010 semester.)

### **Dr. Robert Watson:**

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#### **Research and Presentations:**

- Continues a part time post doctoral appointment in the Empirical Software Engineering Laboratory at the University of Texas.
- Has made two presentations to NASA management at Johnson Space Center on the current progress of the research and a demonstration of the software analysis system.

#### **Activities:**

- Is in the process of developing software that provides automated evaluation of student programs.
- Has attended most of the meetings of ReInvent, Abilene. (a group interest in entrepreneurship and the advancement of the technology based sector in the Abilene economy.)

#### **Community Service:**

- Continues serving his local congregation (Abilene Bible Church) in a technical capacity, supporting all their work with respect to audio/visual needs for worship services and the Living Bible Studies Ministry.

#### **Current Research Interests:**

- Develop software to streamline the production of Moodle question banks. The question banks will be used to implement homework assignments on Moodle with automatic grading.
- Complete current research work with UT and co-author at least one publication from that work.

### **Mr. Rich Brozovic**

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#### **Departmental Contributions:**

- Has relinquished courses taught for other schools and now concentrates on Computer Science course offerings. Has redesigned and updated the following courses: Advanced Programming Concepts, Assembly Language and Computer Organization, Data Structures, and Organization of Programming Languages.
- Is creating a database for use in departmental assessment efforts.

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- Creates, publishes, and scores problems for the Computer Science Programming Competitions.
- Represents the department at Freshman Preview days.

### Activities:

- Continued to serve as board member and Student Chapter Liaison of the local professional chapter, Big Country Chapter, which sponsors student chapters at McMurry University, Hardin-Simmons University, and TSTC West Texas.
- AITP 14th Annual National Collegiate Conference, Oklahoma City OK, Apr 2 – 4, 2009. With 4 students.
- Attended the annual AITP Region 3 Conference in San Angelo, TX, with five students
- Served as faculty sponsor for Webvana 2009, a summer computer camp for middle school students, which distributed almost \$2200 of profit to ten McM Student organizations based on level of work contributed toward camp.

### Professional and Community Service:

- Served as sole judge for the regional Texas UIL Computer Science competition, Apr 2009
- CCSC, Consortium for Computing in Small Colleges, South-Central Region reviewer for papers submitted for publication.

### Current Research Interests:

- Continued enrollment in the Computer Science PhD program at Texas Tech University's Abilene Center for Excellence in Engineering Graduate Studies and Research.
- Continued research in grid computing

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### ***Curriculum Changes***

We are in the process of the second phase of a critical review of our curriculum. Dr. Watson and Mr. Brozovic have already changed one aspect of the program by switching the CSC 1325/1340 courses from Java to C, which will better prepare the students for CS graduate programs. Also effective this semester, the responsibility for several CSC and CIS courses was realigned under the CS Department and the School of Business as appropriate.

#### **CS Major: (28 currently)**

CSC 1325: Fundamentals of Computer Science\*  
CSC 1340: Advanced Programming Concepts  
CSC 2330: Programming Language Topics  
CSC 2370: Assembly Language and  
Computer Organization  
CSC 3330: Data Communications  
CIS 3311: Database Management Systems  
CSC 3360: Data Structures  
CSC 4310: Organization of Programming Languages  
CSC 4340: Operating Systems  
CSC 4360: Software Engineering

**Advanced electives:** 6 hrs CSC/CIS

#### **Supporting courses:**

MATH 2315: Discrete Math  
MATH 2421: Calculus  
MATH 2340: Linear Algebra  
MATH 3351: Statistics  
MATH 4331: Numerical Analysis  
PHYS 1410/1420 or 2510/2520: Physics

\*CSC 1325: now a general education course in the  
critical reasoning category

#### **CS Minor: (2 currently)**

CSC 1325: Fundamentals of Computer Science\*  
CSC 1340: Advanced Programming Concepts  
CIS 3311: Database Management Systems  
CSC 3360: Data Structures

**Advanced electives:** 6 hrs CSC/CIS

#### **BBA CIS Major: (12 currently)**

#### **BBA CIS Minor: (3 currently)**

**No longer require any CS Courses**

1 CIS/CSC advanced elective required

CSC 4360 is dual listed as CIS 4360,  
each required by respective major