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## Computer Information Systems & Quantitative Methods

Preparing students today to take advantage of technology and analytics tomorrow!

### From the Chair

One of the challenges, if not the most daunting one, that faces those of us in the IT field is the rapid pace of change. Like a roller coaster ride it is exhilarating and exciting, but also it takes a lot of energy to keep moving. This semester this fact has been more pronounced than ever. We had our first alumni celebration with graduates from 1974 to 2010. The 1974 graduates took courses such as Fortran, COBOL, and even intermediate typing. Yet they have continued to learn and adapt their skills in today's world of JAVA, the Web, and mobile development. We also had our 5th annual High School IT Symposium. These students represent the future of technology developers and innovators. The contrast of the two groups is eclipsed only by their similarities: the continued desire to learn, the excitement and enjoyment of technology, and their positive outlook of the future.



The department is currently working hard to update its curriculum to prepare today's students for the jobs of tomorrow. In a field where textbooks are obsolete the day they are printed, and a new innovation can render a technology obsolete in just a few years, this task is daunting. But we are up to the challenge! As our successes this past year have demonstrated we are doing things right and we will continue to move forward, ever improving this program to prepare students for the future.

I thank all of you, Counselors, Teachers, Alumni, Advisory Board members, Faculty, Students, and the many others who support this program, for all that you have done and will do.



*The rising STAR of Texas*



## In the News

There are lots of changes going on and it appears that there is a lot of consolidation of technology going on in the smart phone arena. Adobe looks like it is going to no longer adapt Flash Player for mobile devices to new browser, OS version or device configurations. Instead, Adobe will focus on tools that allow Flash developers to create mobile apps by packaging their code to run on Adobe's AIR platform. Maybe Steve was right? Google said that it [plans to discontinue its native Gmail app for the BlackBerry](#).

Now that music apps are on the [Open Graph](#) — and appear in the ticker — Facebook users have shared their listening activity more than 1.5 billion times with their friends.

**Spotify:** Four million people have joined [Spotify](#) since Sept. 22. The service became [available in the U.S.](#) on July 14.

**MOG:** Mog saw a 246% growth in Facebook users .

**Rdio:** Facebook has increased Rdio's new user registrations 30-fold.

**Slacker:** Available across mobile, TV, auto and web, Slacker saw a more than 11x increase in monthly active users in the month following f8.

**Earbits:** This Y Combinator-funded startup experienced a 1,350% increase in the number of users becoming fans of the band they're listening to.

Which do you use?

In 2004, Microsoft's IE owned 95%+ of the Web browser market. In October 2011, according to [NetMarketShare](#), IE is barely above the 50% mark of desktop browsers with 52.63%. Interesting isn't it?

The three horsemen of the advertising apocalypse: Microsoft, AOL and Yahoo are partnering in a bid to counter the online advertising dominance of both Google and Facebook. The partnership will in effect allow the three web giants to sell online adverts across their respective sites, in hope to compete with Google and social network Facebook, which is set to increase its share of advertising dollars for three years in a row.

It's official, the Apple iPad has competition. The Amazon Kindle Fire. Oh by the way, have you met Siri yet? Please tell him/her I say hi.

### Memorable Quotable

"If debugging is the process of removing software bugs, then programming must be the process of putting them in."

--Computer scientist Edsger Dijkstra



# Career of the Month: Database Administrator

## WHAT IS THIS JOB LIKE?

The Internet and electronic commerce (e-commerce) generate lots of data. Computer databases that store information are found in nearly every industry. Data must be stored, organized, and managed. *Database administrators* work with database software to find ways to do this. They identify user needs, set up computer databases, and test systems. They ensure that systems perform as they should and add people to the system as needed. Database administrators often plan security measures. Data integrity, backup, and security are critical parts of the job. Database administrators work in offices or labs. They usually work about 40 hours a week, but evening or weekend work may be needed for meeting deadlines. Telecommuting—working from home—is common for computer professionals. Like other workers who spend long periods in front of a computer, database administrators can suffer eyestrain, back discomfort, and hand and wrist problems.



## HOW DO YOU GET READY?

Database administrators must be able to think logically. Being able to concentrate and pay close attention to detail is important. These computer specialists sometimes work on their own, but they often work in teams. They must be able to communicate with computer personnel, such as programmers and managers. They must also communicate with other staff who may have no computer training. Employers often seek workers who have a degree in computer science, information science, or a related information technology field. Many community colleges and technical schools offer specific training programs to help meet the needs of local businesses. A growing number of businesses also seek workers with a graduate degree. Despite employers' preference for those with technical degrees, persons with degrees in a variety of majors find computer jobs. One factor affecting the needs of employers is changes in technology. Employers often scramble to find workers who know the latest new technologies. Jobseekers can improve their chances by working in internship or co-op programs at their schools. There are many internships where you can learn computer skills that employers are looking for. Certification is a way to show a level of competence. Many employers regard these certifications as the industry standard. One way to acquire enough knowledge to get a database administrator job is to become certified in a specific type of database management. Voluntary certification also is available through various organizations associated with computer specialists. Database administrators may advance into managerial positions. For example, a promotion to chief technology officer might be made on the basis of experience managing data and enforcing security.

## HOW MUCH DOES THIS JOB PAY?

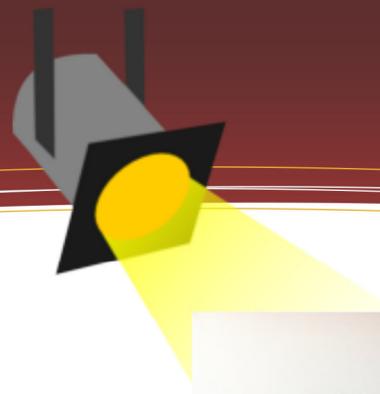
In May 2008, average yearly wages of database administrators were \$72,900. Database administrators who worked at companies that designed computer systems earned an average of \$81,050 in May 2008.

## HOW MANY JOBS ARE THERE?

There were about 120,400 database administrators in 2008. Database administrators work in every sector of the economy. The largest number work in the computer systems design and related services industry. Many work for Internet service providers, Web search portals, and data-processing, hosting, and related services firms.

## WHAT ABOUT THE FUTURE?

The number of database administrators is expected to grow much faster than the average for all occupations through 2018. This is because the Internet and e-commerce will continue to expand, resulting in a continuing need to build and maintain databases. Also, the increasing importance being placed on "cyber security"—the protection of electronic information—will require workers skilled in information security. Job growth will not be as rapid as during the previous decade. The information technology sector will begin to mature and routine work will increasingly be outsourced overseas. Those having a college or graduate degree in computer science or a related field will have a good chance of getting a job. Those having a lot of related work experience will also have a good chance.



## Student Spotlight

Spencer was born and raised in Dallas, Texas. He attended a few community colleges and Dallas Baptist University (studying Music Business) prior to making the transition to Texas State. While he was in high school he fell in love with computers taking computer maintenance classes. Although he had previous knowledge, that class drove him towards my current degree choice of computer information systems.



**Spencer Miller**

Why did I choose CIS? My passion for computers and drive seemed to match the fast paced world of business computing. I previously worked in a call center and felt right at home with the technology, but wasn't enjoying my job of customer support. It seemed the more I watched our computer tech work the more I wanted to work with computers in a business setting. The combination of computer and business courses seemed like it really fit my curious mind. I like to know how things work and that includes business. This insight made me feel comfortable in choosing this degree over CS.



Why Texas State? Once I decided on a major, it was time to find a school. I had heard good things about Texas State from a few classmates in high school so I made sure to look at it when deciding on a school. I scheduled a visit in October 2009 and fell in love with the campus. I had been to previous universities

on visits and they felt busy and uninviting. I knew this would have a negative correlation with my performance in school. Texas State just felt right. I had a great feeling while I was on campus and knew it was for me.

## **Association of Information Technology Professionals**

This has been a wonderful semester for the student chapter of AITP.

This semester the monthly meetings were some of the best.

- The semester started off with a bang with the Department Chair Dr. David Wierschem talking to a packed how of over 70 students. His discussion on getting involved and setting yourself apart really got students motivated.
- Mr. Mark Wey talked about building a business in something you love, using his own experience in starting MW Global solutions.
- The USAA panel was a tremendous success informing students on jobs and careers, where your degree will/will not take you, opportunities in IT and the benefits behind the salary.
- Michael Raiford from Samsung Electronics talked about proper interviewing techniques, examples of some of the types of jobs that are out there and demands for those jobs, and some of the exciting technologies Samsung uses in its fabrication factory in Austin.
- Out last meeting features Mr. Dennis Strong of McCoy's Building Supply where he will be discussing Computerworld ranking of McCoys for technological innovations, including Contractor Services (Professional Customers) and the website/resources that McCoys provides to make their life easier, pass on savings/bulk purchases, order/pickup/credit and more.



The AITP Region 3 Student conference was a tremendous success with 5 first places, 1 second place, 2 third places, and top school honors for the send year in a row.

And finally the high school symposium was a tremendous success. The entire AITP student membership got involved and worked to make the symposium a great success.

Next semester is going to be just as good with great speakers for the monthly meetings, co-hosting the AITP National Collegiate Conference in San Antonio, and hosting the AITP Appreciation Banquet.

# High School Symposium

We would like to thank everyone that came out to support our 5<sup>th</sup> annual IT Symposium. It was our best one yet. We had a wonderful turnout with 320 participants including 250 students representing 15 high schools. All the speaker sessions were well represented and a good time was had by all. Here are the contest results:

## PC Support

- First Place:** Kenny Graves - Information Technology and Security Academy
- Second Place:** Carlos Tapia - Pflugerville ISD
- Third Place:** Benjamin Machala - Elgin High School
- Honorable Mention:** Justin Barbosa - Holmes High School
- Honorable Mention:** Kyle Williams - Information Technology and Security Academy

## Java

- First Place:** Ronald Kinard – Hutto High School
- Second Place:** Max Grant – The John Cooper School
- Third Place:** Branden Monroe – Lehman High School

## Access

- First Place:** Arthur Tello - Lehman High School
- Second Place:** Desiree Montana - Lehman High School
- Third Place:** Yarali Munos - Lehman High School

## Excel

- First Place:** Arthur Tello - Lehman High School
- Second Place:** Desiree Montana - Lehman High School
- Third Place:** Yarali Munos - Lehman High School

## Security

- First Place:** Jonathan Luna - Information Technology & Security Academy
- Second Place:** Aamer Rakla – The John Cooper School
- Third Place:** Bridgette Findley - Information

## Congratulations to all the winners!!!!!!!

Business Careers	29
Central Catholic High School	1
Cypress Springs High School	85
Elgin High School	16
Hendrickson High School	13
Holmes High School	19
Hutto High School	6
Information Technology & Security Academy	27
Karnes City High School	7
Lehman High School	10
Pflugerville ISD	19
San Marcos High School	13
Seguin High School	12
Texas State AITP	32
The John Cooper School	14

## Sponsors and Exhibitors

Accenture	1
Exxon/Mobil Company	1
IBM	4
Randolph Brooks Federal Credit Union	3
Robotics	1
USAA	2
Whole Foods Market	1
Hays High School	1
Texas State University CIS Department	3

## Faculty Accomplishments

Please assist me in congratulating Dr. Garry White who was awarded the 2011 Meritorious Paper Award at the 2011 ISECON conference in North Carolina. His paper "Visual Basic Programming Impact on Cognitive Style of College Students: Need for prerequisites." Was in the top 10 papers out of 100 presented at the conference.

Way to go Garry!

### **Fulton, Lawrence V. (Assistant Professor)**

#### **Conference Proceedings**

*Conference Proceeding (Published)*

Fulton, L., Musal, R., Ivanistkaya, L., Haidar, S., Lee, C. (2011). *Bayesian Hierarchal Models of Final Exam Grades in Statistics Classes, a Two-University Study* (vol. Session 353). American Statistical Association: Joint Statistics Meeting. [www.amstat.org/meetings/jsm/2011/pdfs/2011\\_AB\\_TuesdayAug2.pdf](http://www.amstat.org/meetings/jsm/2011/pdfs/2011_AB_TuesdayAug2.pdf)

### **Lee, Hsun Ming (Associate Professor)**

#### **Conference Proceedings**

*Conference Proceeding (Published)*

Lee, S., Long, J., Mehta, M. (2011). *Designing an e-mentoring application for Facebook*. ACM SIGMIS-CPR Conference.

### **Long, Ju (Associate Professor)**

#### **Conference Proceedings**

*Conference Proceeding (Published)*

Lee, S., Long, J., Mehta, M. (2011). *Designing an e-mentoring application for Facebook*. ACM SIGMIS-CPR Conference.

### **Mehta, Mayur (Professor)**

#### **Conference Proceedings**

*Conference Proceeding (Published)*

Lee, S., Long, J., Mehta, M. (2011). *Designing an e-mentoring application for Facebook*. ACM SIGMIS-CPR Conference.

### **Musal, Rasim M. (Assistant Professor)**

#### **Conference Proceedings**

*Conference Proceeding (Published)*

Fulton, L., Musal, R., Ivanistkaya, L., Haidar, S., Lee, C. (2011). *Bayesian Hierarchal Models of Final Exam Grades in Statistics Classes, a Two-University Study* (vol. Session 353). American Statistical Association: Joint Statistics Meeting. [www.amstat.org/meetings/jsm/2011/pdfs/2011\\_AB\\_TuesdayAug2.pdf](http://www.amstat.org/meetings/jsm/2011/pdfs/2011_AB_TuesdayAug2.pdf)

## Alumni

In the relatively short time the CIS Department has existed, it has set itself apart. It was only the second program of its kind in the state of Texas when it began in 1974. Its adoption of the DPMA organization, now AITP, has provided an avenue for its students to set themselves apart through leadership, peer

competition, and team work. Many first jobs were obtained because of the knowledge obtained, and skills demonstrated by students involved in this organization.



TEXAS  
STATE  
ALUMNI  
ASSOCIATION

Unfortunately we have no historical record of past members, their roles, or their accomplishments. In an effort to rectify this, we are building a database of past DPMA/AITP members and we are asking you to share any information that you may have. If you were a member of DPMA or AITP, if you have any pictures or memories, we would like you to share them with us. Just send us an e-mail and attach any pictures to: [dw50@txstate.edu](mailto:dw50@txstate.edu).

On another note, the alumni maps have been a great success. These maps which display alumni business cards and work locations are displayed in the department office and are brought to all recruiting events. They have helped communicate the success and possibilities that a degree in CIS has to offer. If you haven't sent us your business card please just drop one in the mail to: David Wierschem – Chair, Department of CIS & QMST, Texas State University, 601 University Dr., San Marcos, TX 78666.

## Useful links

- Computer Information Systems and Quantitative Methods Department <http://www.cis.txstate.edu/>
- Texas State Student Chapter of AITP <http://www.txstateaitp.org/>
- AITP <http://www.aitp.org>

## Important People

CIS Advisor: Bethany Mellum to make an appointment call 512-245-1993 or visit <http://advising.mccoy.txstate.edu>



CIS & QMST Administrative Assistant:  
Marjann Warren



## Important Dates

- December 5th last day of class
- December 7-14 final exams
- December 16th McCoy college of business Administration  
MBA Hooding Ceremony
- December 19th Grades available on Cats web
- January 5-13 Late registration and schedule changes
- January 17th first day of classes
- January 17-20 schedule changes



For back copies of Bits & Bytes, or for white papers on What is CIS? What are the different types of technology degrees? Why get involved with Extracurricular Activities? Visit the CID & QMST website at <http://www.cis.txstate.edu/>. You can find them under the Newsletters and Resources tabs.