



Director's Chair

Greetings AIMS Family!

November is not only a time for eating a wonderful meal (Turkey, Dressing and all the trimmings), but also a time to reflect on all of the blessings you have received this past year. Please take a moment after you read this newsletter for a moment of silence to truly think about all that you have to be

thankful for!

I have enjoyed reading about some of your accomplishments over the school year and hope to hear even more as we go into the New Year! As I mentioned several newsletters ago, we are extremely busy trying to complete our Annual Performance Report for the U.S. Department of Education and also grant writing for

program renewal!

I pray that each of you have a blessed Holiday! I look forward to seeing you at the upcoming workshops! Take care!

Sincerely,
Doris



Dr. Sarr with her husband Pa-Lamin and daughter Tiffany.

NOVEMBER BIRTHDAYS

AMBER BRAIMA

SHARELL GRIFFITH

JASMINE DYSART

LA'TARVIA HARRIS

MARIA GALARZA-MEDINA

DEVONTE SMITH



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Coordinator's Corner—AIMS I

Hello AIMS!

So hard to believe that November is here! This school year is going by so quickly; don't blink or you just might miss something important!

November is definitely an important month for the AIMS Community. Bridge Students have the Mandatory Bridge Workshop I on November 5, 2011. This workshop is the first step in preparing you for the summer. The workshop will cover in-depth information about: 1) The College Admissions Process, 2) Scholarships, and 3) Financial

Aid. This information is **EXTREMELY IMPORTANT** so please attend if at all possible. If you cannot attend the workshop, please contact me and let me know so that Evan or I can make arrangements to meet with you at your school to fill you in on the information provided. We will be filling out the FAFSA (Free Application for Federal Student Aid) so please bring your parents' 2010 Income Tax Information with you to complete the application.

LOTS of events and activities coming your way so please check out our Facebook Page and Listserv



Messages often! Keep those grades up because those who strive for greatness often get rewards! Have a great Turkey Day and don't eat too much!

Sincerely,



Stephen D. Keene

Stephen performing with Racerband @ MSU Homecoming 2011

Coordinator's Corner—

AIMS II

Hey there AIMS Family!!

I hope all is well your way! Grade reports are rolling and there are many of you that need to be taking advantage of the online tutoring. Please do this! If you have any questions about that please get a hold of me. I will go in more detail about how to access the tutoring during our next workshop on Saturday, November 5th! This is mandatory for you Bridge students, but everyone else should come too. Start talking to friends about carpooling now so you don't run into a time crunch next week.

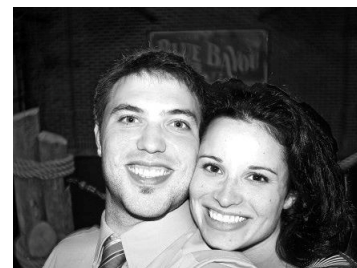
For those that recently took the

ACT: Way to go! When you get your scores, be sure and let us know what they are. You will want to take it again, and the AIMS staff is dedicated to improving your score!

Well, I'm keeping it short and sweet this month. I know you all are very busy — the middle of the term can get quite hectic, but hang in there and don't slack!! Let me know if you need anything!

"The road to success is dotted with many tempting parking places". ~Author Unknown

Evan O'Neal, Coordinator
AIMS II





CAREER PROFILE: STATISTICIAN

Significant Points

- About 30 percent of statisticians work for Federal, State, and local governments; private-industry employers include scientific research and development services, insurance carriers, and pharmaceutical and medicine manufacturing.
- A master's degree in statistics or mathematics is the minimum educational requirement for most jobs. Individuals with a degree in statistics are likely to have opportunities in a variety of fields.

Nature of the Work

Statistics is the scientific application of mathematical principles to the collection, analysis, and presentation of numerical data. *Statisticians* apply their mathematical and statistical knowledge to the design of surveys and experiments; the collection, processing, and analysis of data; and the interpretation of experiments and survey results. Opinion polls, statements about the accuracy of scales and other measuring devices, and information about average earnings in an occupation are all usually the work of statisticians.

Statisticians may apply their knowledge of statistical methods to a variety of subject areas, such as biology, economics, engineering, medicine, public health, psychology, marketing, education, and sports. Many economic, social, political, and military decisions cannot be made without statistical techniques, such as the design of experiments to gain Federal approval of a newly manufactured drug. Statistics might be needed to show whether the seemingly good results of a drug were likely because of the drug rather than just the effect of random variation in patient outcomes.

One technique that is especially useful to statisticians is sampling—obtaining information about a population of people or of a group of things by surveying a small portion of the total. For example, to determine the size of the audi-

ence for particular programs, television-rating services survey only a few thousand families, rather than all viewers. Statisticians decide where and how to gather the data, determine the type and size of the sample group, and develop the survey questionnaire or reporting form. They also prepare instructions for workers who will collect and tabulate the data. Finally, statisticians analyze, interpret, and summarize the data with the use of computer software.

In business and industry, statisticians play an important role in quality control and in product development and improvement. In an automobile company, for example, statisticians might design experiments in which engines are run until failure and breakdown in order to determine the failure time of engines exposed to extreme weather conditions. Working for a pharmaceutical company, statisticians might develop and evaluate the results of clinical trials to determine the safety and effectiveness of new medications. At a computer software firm, statisticians might help construct new statistical software packages to analyze data more accurately and efficiently. In addition to designing experiments for product development and testing, some statisticians are involved in deciding what products to manufacture, how much to charge for them, and to whom the products should be marketed. Statisticians also may manage assets and liabilities, determining the risks and returns of certain investments.

Nearly every government agency employs statisticians. Some government statisticians develop surveys that measure population growth, consumer prices, or unemployment. Other statisticians work for scientific, environmental, and agricultural agencies and may help figure out the average level of pesticides in drinking water, the number of endangered species living in a particular area, or the number of people afflicted with a certain disease. Statisticians also are employed in national defense agencies, determining the

accuracy of new weapons and the likely effectiveness of defense strategies.

Because statistical specialists are employed in so many different kinds of work, specialists who use statistics often have different professional designations. For example, a person using statistical methods to analyze economic data may be called an *econometrician*, while statisticians in public health and medicine may hold titles such as *biostatistician* or *biometrician*.

Work environment. Statisticians generally work regular hours in an office environment. Sometimes, they may work more hours to meet deadlines.

Some statisticians travel to provide advice on research projects, supervise and set up surveys, or gather statistical data. Although e-mail and teleconferencing make it easier for statisticians to work with clients in different areas, there still are situations that require the statistician to be present, such as during meetings or while gathering data.



CAREER PROFILE: STATISTICIAN (continued)

Training, Other Qualifications, and Advancement

A master's degree in statistics or mathematics is the minimum educational requirement, but research and academic jobs generally require a Ph.D., while Federal Government jobs require at least a bachelor's degree.

Education and training. A master's degree in statistics or mathematics usually is the minimum educational requirement for most statistician jobs. Research and academic positions usually require a Ph.D. in statistics. Beginning positions in industrial research often require a master's degree combined with several years of experience.

Jobs with the Federal Government require at least a bachelor's degree. The training required for employment as an entry-level statistician in the Federal Government is a bachelor's degree, including at least 15 semester hours of statistics or a combination of 15 hours of mathematics and statistics with at least 6 semester hours in statistics. Qualifying as a mathematical statistician in the Federal Government requires 24 semester hours of mathematics and statistics, with a minimum of 6 semester hours in statistics and 12 semester hours in an area of advanced mathematics, such as calculus, differential equations, or vector analysis.

Many colleges and universities offer degree programs in statistics, biostatistics, or mathematics, while other schools also offer graduate-level courses in applied statistics for students majoring in biology, business, economics, education, engineering, psychology, and other fields. Acceptance into graduate statistics programs does not require an undergraduate degree in statistics, although good training in mathematics is essential. Many schools also offer degrees in fields that include a sufficient number of courses in statistics to qualify graduates for some entry-level positions with the Federal Government. Required subjects for statistics majors include differential and in-

tegral calculus, statistical methods, mathematical modeling, and probability theory. Additional recommended courses for undergraduates include linear algebra, design and analysis of experiments, applied multivariate analysis, and mathematical statistics.

Because computers are used extensively for statistical applications, a strong background in computer science is highly recommended. For positions involving quality and improvement in productivity, training in engineering or physical science is useful. A background in biological, chemical, or health science is important for positions involving the preparation and testing of pharmaceutical or agricultural products. Courses in economics and business administration are valuable for many jobs in market research, business analysis, and forecasting.

Advancements in technology have made a great impact on statistics. Statistical modeling continues to become quicker and easier because of increased computational power and new analytical methods or software. Continuing education is important for statisticians, who need to stay abreast of emerging technologies to perform well.

Other qualifications. Good communication skills are important for statisticians who seek a job in private industry, because these statisticians often need to explain technical matters to persons without statistical expertise. An understanding of business and the economy also is valuable for those who plan to work in private industry.

Advancement. Beginning statisticians generally are supervised by an experienced statistician. With experience, they may advance to positions with more technical responsibility and, in some cases, supervisory duties. Opportunities for promotion are greater for people with advanced degrees. Master's and Ph.D. degree holders usually enjoy independence in their work and may engage in research, develop statistical methods, or, after a number of years of

experience in a particular area, become statistical consultants.

Employment

Statisticians held about 22,600 jobs in 2008. About 20 percent of these jobs were in the Federal Government, where statisticians were concentrated in the Departments of Commerce, Agriculture, and Health and Human Services. Another 10 percent were found in State and local governments. Most of the remaining jobs were in private industry, especially in scientific research and development services, insurance carriers, and pharmaceutical and medicine manufacturing.

Job Outlook

Average employment growth is projected. Individuals with a degree in statistics should have opportunities in a variety of fields.

Employment change. Employment of statisticians is projected to grow 13 percent from 2008 to 2018, about as fast as the average for all occupations. The demand for individuals with a background in statistics is projected to grow, although some jobs will be in occupations with titles other than statistician.

The use of statistics is widespread and growing. Statistical models aid in decision making in both private industry and government. There will always be a demand for the skills statisticians provide. Technological advances are expected to spur demand for statisticians. Ever-faster computer processing allows statisticians to analyze greater amounts of data much more quickly and to gather and sort through large amounts of data that would not have been analyzed in the past. As data processing continues to become more efficient and less expensive, an increasing number of employers will want to employ statisticians to take advantage of the new information available.

Biostatisticians should experience employment growth, primarily because of

CAREER PROFILE: STATISTICIAN (continued)

the growing pharmaceuticals business. As pharmaceutical companies develop new treatments and medical technologies, biostatisticians will be needed to do research and clinical trials.

Job prospects. Individuals with a degree in statistics have opportunities in a variety of fields. For example, many jobs involve the analysis and interpretation of data from economics, biological science, psychology, computer software engineering, education, and other disciplines. Additional job openings will become available as currently em-

ployed statisticians transfer to other occupations, retire, or leave the workforce for other reasons.

Among graduates with a master's degree in statistics, those with a strong background in an allied field, such as finance, biology, engineering, or computer science, should have the best prospects of finding jobs related to their field of study.

Earnings

Median annual wage-and-salary wages of statisticians were \$72,610 in May

2008. The middle 50 percent earned between \$52,730 and \$95,170. The lowest 10 percent earned less than \$39,740, while the highest 10 percent earned more than \$117,190.

The average annual salary for statisticians in the Federal Government was \$92,322 in March 2009, while mathematical statisticians averaged \$107,015.

Winner of the 2005 Tony Award for Best Musical, Monty Python's Spamalot is the outrageous new musical comedy lovingly ripped off from the film classic "Monty Python and The Holy Grail." Based on the Tony Award winning direction of Mike Nichols, with a book by Eric Idle and music and lyrics by the Grammy Award-winning team of Mr. Idle and John Du Prez, Spamalot tells the tale of King Arthur and his Knights of the Round Table as they embark on their quest for the Holy Grail. Flying cows, killer rabbits, taunting Frenchmen and show-stopping musical numbers are just a few of the reasons audiences everywhere are eating up Spamalot.

This will be a special Cultural Event offered to students who have excelled academically and are active participants in the AIMS Workshops and Events that are being held throughout the Academic Year. We will meet for dinner prior to the show as well! More information about this special event coming soon!!!



Tue, 01/31/2012 - 7:30pm
Luther F. Carson Center
Paducah, KY



ADVENTURES IN MATH & SCIENCE

240 Blackburn Science Building
Murray, KY 42071

Phone: 1-877-424-6777
Fax: 270-809-4351
E-mail: www.murraystate.edu/aims



Fri, 04/27/2012 - 7:30pm at the Luther F. Carson Center Paducah, KY
Another special Cultural Event being offered to AIMS Academic Achievers!!! More info soon!

*Hailed by the RIAA as the most commercially successful R&B group of all time, Boyz II Men has returned to center stage with their first major-label release in five years, the stunning new album, **Motown: A Journey**. Boyz II Men was nominated for two Grammy nominations in 2009 for this latest release: **Best R&B Album and Best R&B Performance by a Duo or Group with Vocals for Ribbon in the Sky**. Their first and now, classic album **Cooleyhighharmony**, spun off three major hit singles, “**Motownphilly**,” “**It’s So Hard to Say Goodbye to Yesterday**,” and “**Uhh Ahh**,” all of which made the **Top Five** and hung on the **Billboard Top 200** for an astounding **133 weeks**. It sold over **nine million copies in the US** alone and earned **Boyz II Men** their first **Grammy Award, for Best R&B Performance by a Duo or Group with Vocals**. In 1992, **Boyz II Men** re-released the single, “**End of the Road**,” which became **Boyz II Men’s all-time biggest hit**. It held the **Number One spot on the Billboard Hot 100** for **thirteen weeks**. **Boyz II Men’s** second album, simply titled **II**, appeared in 1994 and topped the **Billboard chart for five weeks**. The group won the **Grammy Award for Best R&B Album**, and sold over **twelve million copies** thanks to its two **Number One Pop singles**, “**I’ll Make Love to You**” (also a long-running **R&B Number One**) and “**On Bended Knee**,” both certified **platinum**.*



AIMS SCHEDULE AT-A-GLANCE

November

5th 10:00am – 1:00pm

Mandatory Bridge Workshop I/AIMS Fall Workshop

251 Blackburn Science Bldg

23rd – 27th MSU Thanksgiving Break

December

TBA Dinner @ Patti’s Restaurant and Variery, Music, Memorie & More Show!
Honor Roll Students—Invitation Only!

10th 10:00am

MSU Fall Commencement

19 University Closed through January 2, 2012

January

16th Martin Luther King Jr. Day

21st 10:00am—1:00pm

Mandatory Bridge Workshop II/AIMS Spring Workshop

31st AIMS Cultural Event
Spamalot –Luther F. Carson Center
5:00pm Dinner—TBA

February

18th KY TRiO Day at Berea College

25th–29th 40th Annual SAEOPP Conference

March

16th AIMS Application Deadline

April

TBA AIMS Spring College Tour

21st 9:00am – 12:00pm
AIMS Summer Orientation
251 Blackburn Science Building

27th AIMS Cultural Event
Boyz II Men—Luther F. Carson Center

5:00 Dinner—TBA

May

28th 2:00pm – 4:00pm

Bridge 2012 Move-In Day

29th

Summer Classes Begin

June

1st – 3rd Bridge Weekend

10th Undergraduate Move-In Day

27th Bridge Graduation

28th Cultural Extravaganza

29th Closing Symposium

29th – July 3rd End of Summer Trip -

TBA