

# RISKY BUSINESS

— News and Notes on the Actuarial Science Program —

Department of Mathematics

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The University of Texas at Austin

## Welcome!

Welcome to another issue of Risky Business, the Official Newsletter of the Actuarial Program at UT Austin. In this issue you'll learn about the differences between the consulting and insurance practice, take a closer look at the actuarial profession, and learn more about the program and our students' activities.

While the world of actuarial science is growing, it remains a very tight-knit and supportive community. This newsletter and its contents is a small testament to the lengths that actuarial students and professionals will go to help aspiring actuaries. The extensive alumni network, the amazing staff and faculty to which UT students have access, and the wonderful community of students old and new is what makes this program and this profession so great.

From interviews to experience-based insight, there is plenty of information regarding exam support, the many career options that are open to actuaries, different ways to take advantage of the opportunities afforded to students in this field, and other important characteristics that make an actuary truly successful. ~ Nicholas Franzese, Editor

## Gary Josephson-President of the CAS Visits UT!

On March 19<sup>th</sup> 2013, our Actuarial Science Club had the honor to host one of the most important members of the actuarial profession: Mr. Gary Josephson—President of the CAS and consulting actuary at Milliman in Milwaukee!

Mr. Josephson's visit was marked by a lot of excitement and a high student turnout. The room was filled with students and faculty members as they waited to learn more about the P&C Industry and the actuarial accreditation process.

During his presentation, Mr. Josephson talked about many of the roles Property and Casualty actuaries take on in the insurance business such as determining reserve amounts and ratemaking.



Gary Josephson, FACS, MAAA, and President of the CAS, principal and consulting actuary with the Milwaukee office of Milliman.

## Table of Contents

President of the CAS Visits UT! Pg. 1
Persuasion and the Classics Pg. 2
Outstanding Staff, Outstanding Award Pg. 2,4
Consulting v. Insurance 3,5
Health Care Reform Pg. 4,5
Career Advice Pg. 6
Exam Rehab Pg. 6
Actuarial Science Club Pg. 7

## From the Editors

We greatly appreciate the input of all those who contributed to this issue of *Risky Business*. We are thankful for the combined efforts of the writers, and interviewees. We would also like to give a special thanks to the President of the CAS, Gary Josephson, for visiting our campus as well.

As the new editors, we look forward to keeping you informed on the status and progress of the Actuarial Science Program here at UT and the actuarial profession as a whole over the next few years!

~ Nicholas Blekas, Nicholas Franzese, Jason Rossiter

Soon after this explanation, Mr. Josephson talked about the hot topic all actuarial students had in mind; the incoming changes to the accreditation process. In light of the announcement by the SOA to offer a new track in P&C, many students and professionals have found themselves wondering what the CAS will do and how the industry will react to this change. On top of this confusion, it was recently announced that the SOA and CAS will cease to administer preliminary exams together.

According to Mr. Josephson, the CAS is planning on giving credit for the preliminary exams offered by the SOA. Additionally, the CAS is also planning on offering another preliminary exam that covers statistics in more depth.

The club, its members, and the actuarial program at UT are thankful to have had the privilege to host Mr. Josephson at one of our meetings, and on behalf of the department I wish to thank him for his involvement.

The video, audio, and PowerPoint presentation will be available in our school's website.

~Keith Cruz, Former Editor, Contributor

## Persuasion and the Classics

Whether you are an actuarial student wishing to work in consulting or insurance, communication skills are an integral requirement of the job. As part of the curriculum at UT, all actuarial students are required to take two writing classes before graduating. Students can pick from a wide range of subjects to satisfy this. From Economics and Mythology to Women's Studies and Rhetoric, many classes are available to you every semester. All of them have something to offer, and the classes you choose must be based upon your interest on the subjects taught. That being said, I believe that when it comes to communication and consulting, taking classes that discuss the classics and rhetoric could add the most value to your career and personal life.

But why should you read the classics? And what can be learned from rhetoric as a whole?

The most apparent answer to the first question would be: because these books are old; however, this is never a reason to read anything. Anybody who is interested in politics (or in any other organization made up of people) must seek to understand how people think and behave.

The classics teach us about people. Plato, Aristotle, Hobbes, Machiavelli, Spinoza all speak to the human condition. Sure, the historical context of the conflicts they discuss is different from the modern problems we face in our society; but this should not discourage you from reading them. Their books offer valuable lessons and ideas to those who venture into them. They are relevant not because the ideas they present are revolutionary (they surely were when they were published) but because they speak about the concerns people experienced many years ago. The way people think and react to problems is always the same regardless of the time period. Fear, love, hope, and every other emotion plays as much of an important role in today's issues as it did when these books were written; and if you are interested in persuasion, you should be interested in the emotions.

Building emotional intelligence is of supreme importance; and surprisingly enough, much about the emotions can be learned from these books. But how does this relate to persuasion and public speaking?

A powerful speaker is one who can communicate a message to an audience at more than one level. They talk directly into the mind of their audience, expanding their intellect and understanding, but they also speak directly into their hearts, artfully stirring the passions of their audience towards a goal and motivating people to act and support their cause. This is why rhetoric is so important; being able to effectively pick one's diction when crafting a message could make all the difference between persuading and failing to persuade.

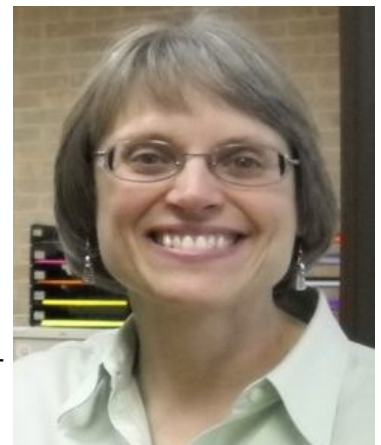
By understanding people and mastering the power of words, you can easily become a great communicator. Practice is important; but by reading influential books and studying their language as well as the persuasive techniques of their authors, you can easily gain an edge over those who haven't read them. So if you wish to become an effective communicator, grab a book and read on!

*~ Keith Cruz, Former Editor, Contributor*


## Ronda Hall wins Outstanding Staff Award!

Ronda Hall, senior academic advisor for actuarial science, physics, and astronomy, recently won the President's Outstanding Staff Award at UT! According to the university website, the award honors and recognizes the invaluable contributions of non-teaching staff members whose outstanding dedication, competence, and ingenuity have had a significant impact on the university. We as the actuarial program are very proud of her for not only receiving this award, but also because she is truly a great guide for all of our students pursuing the actuarial route.

Ms. Hall grew up in Indiana and moved to Texas soon after college. She received her master's degree in Social Work from UT Austin in 1991 and worked as a social worker for a little over ten years upon graduation. Believing that the personal one-on-one elements of advising suited her better, she switched to academic advising.



*(Continued on page 4)*



## Consulting v. Insurance—The Actuarial Perspective

### Consulting

An actuary is constantly learning, from the time they are in college to the time they are ready to retire. While educational knowledge is crucial to the success of any actuary, learning about one's own personality is equally important. The different career paths available require distinct lifestyles and may be a better fit for some than for others. The majority of actuaries will seek careers in either general insurance or consulting. In order to receive a better understanding of some of the traits of a consulting actuary, your writer spoke to University of Texas Alumnus and Retirement Consulting Actuary for Aon Hewitt, Catherine Kenagy.

First, Mrs. Kenagy told me about her path to consulting from college. As a sophomore at UT she secured an internship with Austin based consulting firm Rudd and Wisdom. After this experience, she was sure that she wanted to pursue a career in consulting with a pension focus. Clearly, we can see that internships are the most important way to really know if a job is right for you; but is there any other way we can predict our interests before gaining experience?

Mrs. Kenagy said that before she began her career as a consultant she enjoyed tutoring and volunteer teaching. This became valuable, she explained, because an actuarial consultant must explain complex ideas to people who aren't as familiar with them. Therefore, people who enjoy business, communication, and networking may be interested in this path.

While communication skills are a vital part of consulting, there are also lifestyle considerations which must be accounted for. For Mrs. Kenagy, flexibility is one important factor. She claimed that "Consultants tend to have laptops and aren't confined to a set number of hours a day. So it's easy to leave work early and make up the hours later; or work from home when personal needs arise." Along with flexibility, the variability of the position is also important. Consultants have different clients with different problems to solve, which contrasts to the one-product work of insurance.

Finally, working with clients means there is a slight amount of travel required. For Mrs. Kenagy this is only minimal. At Aon, she is usually limited to travelling to a single annual client meeting; *(Continued on pg. 5)*

### Insurance

The Society of Actuaries (SOA) and Casualty Actuarial Society (CAS) are professional actuarial organizations. Currently, the SOA represents actuaries from all major areas of practice except property and casualty insurance, which are represented by the CAS. The CAS is mainly involved in the property and casualty areas of the actuarial profession. With all the differences between both organizations and the kind of work their actuaries do, many students can feel lost when discerning between the two. For this reason, I have asked UT alumnus and current USAA employee, Scott Merkord a few questions about the actuarial science field, and the unique challenges the P&C business presents. He is also a Fellow of the Casualty Society and Member of the American Academy of Actuaries.

#### **Why did you choose to go through the CAS track rather than the SOA?**

During my sophomore year at UT, I attended an actuarial club presentation delivered by Allstate which discussed catastrophe models, meteorology, and the effects of recent hurricanes on property and casualty insurance. I was fascinated by these concepts that I eventually took an internship with Allstate after my junior year. I continue to enjoy the dynamic nature of casualty insurance as we are analyzing recent data to make our decisions. Climate change and vehicle telematics are just two examples of the dynamic environment where we work.

Property and Casualty insurance is very tangible as it is required to carry auto insurance in every state if you own a car, and it is the American dream to own a home. Casualty insurance is also extremely competitive as seen by the amount of advertising companies invest, so personal lines casualty actuaries are working everyday to ensure their company is in the best position to provide protection to their members.

#### **Each actuary has a specific job they have within the company they work. Can you explain a typical workday for you?**

In my current role, I am responsible for pricing lines of business for a given state. Thus, I am involved in projects that ensure we are priced appropriately at both the aggregate and individual rate level. At the aggregate level, we need to make sure that our rates are not excessive or inadequate. At an individual level, we need to ensure we are not unfairly discriminatory while ensuring we have correct risk classification systems in place to attract and retain members at the appropriate premium level while reducing our risk of adverse selection. *(Continued on pg. 5)*



(*Outstanding Staff, Outstanding Award from pg. 2*)

She has worked as an advisor for the past eleven and a half years, with seven and a half of them being in the math, physics, and astronomy office at UT. When asked about her favorite part about the job, she smiles and responds: "meeting with the students." She enjoys taking the time to getting to know all the students she is responsible for looking over, even if the meetings are short, as she understands that being a college student can be busy.

She remains modest, as she gives many thanks to the excellent faculty of the math department, who are always around to help both students and the advising staff with any questions they may have. She is grateful for the well-recognized actuarial program at UT and remains prideful in being the main advisor for the program.

When asked if she has any advice for incoming freshmen and undergraduates in the actuarial program, Ms. Hall leaves us with valuable information: "Ask for help when you need it. UT does a great job at hiring highly knowledgeable professors in the math department and they are always around to assist students. And make sure to never underestimate your workload. Work harder than you think you need to in college, and it will greatly pay off!"

As the recipient of the President's Outstanding Staff Award, Ms. Hall stays humble. She was quite surprised about the whole thing, and says that it is very nice to be recognized. "You feel like you're making a difference and that what you are doing helps the department," she says, and we could not agree more! ~ *Peter Liu, Contributor*



### **Health Care Reform**

While there has been much debate about the benefits and consequences of the Health Care reform for individuals buying healthcare and those involved in providing healthcare, little attention has been given to the effect healthcare reform will have on the job market for actuaries. Cabe Chadick, Senior Vice President & Principal at Lewis & Ellis, Inc., agreed to answer questions on this topic.

#### **How will healthcare reforms affect the actuarial job market for graduating actuaries?**

Healthcare reform has, and I expect, will continue to create opportunities for actuaries... Healthcare reform has created a lot of uncertainty in an area of insurance, specifically health insurance that had become relatively predictable over decades of experience within a consistent regulatory climate. That "climate" has now changed dramatically and there is a tremendous amount of chaos, hopefully temporary chaos. Chaos creates opportunities for actuaries, often because those individuals within the health insurance industry look to actuaries to take a best guess at future events when the climate changes so much.

#### **What can students who are just starting to study to become actuaries expect to change before they're ready to look for jobs?**

First, change is constant. It's the amount of change that varies. If you don't like change, you are in for a rude awakening as an actuarial student, a fully-licensed actuary, or any individual trying to create and manage a rewarding career. Get a good grounding in the basic "hard sciences" such as math and computer science and then learn how to write, speak, and communicate. Learn how to read people and the non-verbal clues they give off. Learn politics and not just what you see on the news but how any organization such as an insurer has internal politics. Take a good macroeconomics course.

Also, much of the classics one reads in college history and literature that you don't think applies to the real world teaches you such things

#### **What is the most important thing graduating actuarial science students need to know about healthcare reform?**

It will continue to create a lot of change and chaos for a number of years and this will create opportunities. Students should not be afraid of joining smaller or atypical organizations other than the "big boys" of this sector as these organizations are sometimes doing the most exciting stuff. The students should read "hard analysis" rather than opinion articles and form their own opinions.

#### **Will healthcare stabilize after this, or are many more reforms and changes expected in the near future?**

2014 is a huge year in the multi-year implementation of the 2009 ACA health care reform law. And it doesn't stop with 2014. The massive temporary federal subsidies, especially within the individual non-group market, will continue through 2016 and then after their absence will create a vacuum of money which will cause higher rates to the individuals within those risk pools; possibly creating more uncertainty and certainly a lot of press and political attention. Nonetheless, my personal unproven opinion is that healthcare will stabilize in the latter part of this decade.

#### **What is an often overlooked effect of healthcare reform?**

My personal, again unproven, opinion is that news organizations, experts, and politicians overlook, or underestimate, the incredible power when the law of large numbers gets conjoined with individuals and employers acting within their own personal financial interest. Much of the law and some of the expert predictions are based on individuals as well as employers "doing the right thing" as opposed to what's in their individual financial interest. (*Continued pg. 5*)

*(Consulting continued from pg. 3)*

Dealing with various clients may lead to high stress situations. Mrs. Kenagy says that while she enjoys not knowing when a call may arise, or who may be calling, there are times when multiple calls come at once and these can be overwhelming if one is not well organized. There are also retirement specific challenges which arise from different learning objectives. For this track there are two extra EA exams to be taken along with the SOA. exams. According to Mrs. Kenagy these exams “cover the legislation that dictates what companies with pension plans can and can't do; and how much money they have to put aside for the financial well-being of the pension plans.” She went on to say that this extensive coverage of the law should be considered by those interested.

For those in the actuarial program at U.T. Mrs. Kenagy made these final recommendations:

“Internships will give you the best idea of what type of career path is best for you. And network!! Ask your friends that graduated a year or two before you how they are enjoying their jobs and what their average day is like. Anyone who comes to campus to present is a great resource. Ask them what their entry-level positions' average day is like. You'll start getting an idea of what sounds like it would be the best fit for you!”

~ Nicholas Blekas, Editor

*(Insurance continued from pg. 3)*

**Risk management plays a major role in the insurance industry. How important would you say it would be for college students to take a risk management class, even if the student chooses the SOA track rather than the CAS track?**

Risk Management courses will be valuable to actuaries working in any field because actuaries do not work in isolation. Actuaries are actively communicating with other areas of the company especially as enterprise risk management increases in importance for financial services companies. As a property and casualty actuary, our view of risk is influenced by other areas of our company. We cannot just manage our property and casualty risk independently of other areas. Actuaries are tested on risk management concepts in the higher level actuarial exams as well. Actuaries can also pursue the CERA designation now either through the SOA or CAS which is a risk management credential.

~ Cyrus Rustomji, Contributor



*(Health Care continued from pg. 4)*

When this decision gets repeated millions of times, the law of large numbers of those millions of decisions will create an overwhelming force that will show the true impact of the reform law. The experts and politicians' opinions won't matter. 2014 will be a watershed year in these decisions taking hold. I hope I'm around in 20-30 years to look back and see what worked, what was fixed, and the long-term effects of the law.

**Are there any actuary groups that are working to support or remove the healthcare reform?**

I am not aware of any organized actuarial body that is pushing, or lobbying, one way or the other with regards to the healthcare reform law. The SOA and the AAA both try to help the regulators fill in the "missing holes" of the law's implementation. I hope the regulators listen. I am proud of the actuarial profession. I love our profession's motto, and wish I could I could take credit for it, that "actuaries substitute facts for impressions..." I and I think other actuaries believe the law will work or fail of its own accord. Its flaws will become self-evident. I believe that all the millions of impressions expressed in the news and in Washington D.C. about the healthcare reform law will be like snowflakes in a blizzard. They will all melt and wash away and the truthful impact, primarily from the law of large numbers, will bear out over time. Again, I am proud of my profession but actuaries are human and bring their political and religious beliefs to bear; however, I believe our profession does an incredible job to lessen impressions and substitute facts where they are available.

According to the Bureau of Labor Statistics, actuarial job growth will be around 27% from 2010 to 2020. With this in mind, actuarial students can be confident in the prospects of finding a job once they graduate. The relative demand for disciplines within the actuarial field may change with healthcare reform as Mr. Chadick said, but the field as a whole will continue to offer employment to all those who are hard-working and interested.

Cabe Chadick works at Lewis & Ellis, Inc., an actuarial consulting firm that covers a wide breadth of disciplines. He graduated from Louisiana State University with a bachelor's in Mathematics with a minor in Computer science and works in product development, accident & health insurance, and healthcare analysis at Lewis & Ellis, Inc. and has served as interim Chief Actuary for the California Department of Managed Healthcare. ~ Jason Rossiter, Editor

## LinkedIn Network!

As one of our campus relations initiatives, the actuarial program would like to invite you to join our Actuarial LinkedIn Network. We hope to use this platform as a way to communicate with recruiters, alumni, and students in an efficient manner. If you would like to join the network, or would like to sign up for the Newsletter please e-mail [risky.business.editor@gmail.com](mailto:risky.business.editor@gmail.com)

## Career Advice

Progressing through the actuary program and approaching graduation is possibly one of the most stressful tasks an actuarial student can experience. Many students struggle with questions like: how many exams should I have passed by graduation? And how many internships do I need to have? While researching these answers online can be a good idea, one must not forget the priceless resources that classmates and alumni bring to the table.

Jake Stevens, a 4<sup>th</sup> year actuarial student, was kind enough to share his experience with me and the actuarial department. Entering the actuary program upon his freshman year, Jake has completed the P, FM, MFE exams. Jake has also interned with a variety of companies while at UT. He received two of his internships by posting his resume to ScienceWorks, a website created by the College of Natural Science Career Design Center that allows students to post their resumes for future employers to view. He got the other two internships by going to the career fairs. Jake added that “there is nothing [he] regrets more than not going to the career fairs as early as possible”. He, as well as many other actuaries, believes that networking with companies, as well as your peers, is vital for success in the profession.

Networking is arguably one of the most important things to do while progressing through the actuary program. By going to career fairs and Actuarial Science Club meetings, you have to opportunity to meet and speak with many different employers that may be able to give you an internship or job. By meeting them ahead of time, you gain an advantage over other applicants that are applying for the same job. So don't be afraid to talk to potential employers when given the chance.

Jake also suggested that actuary students should begin taking exams as soon as possible, while holding as many internships as possible in order to succeed. While this may seem like an obvious suggestion, it is very easy to get caught up in the rigorous course work and college life and put off internships and exams until later. If at all possible, try to knock those exams out one at a time by starting early and it will make your resume that much more appealing. Also, you cannot get an internship if you do not apply! Even if you don't think you have a chance of getting a specific internship, apply. You will gain experience in the applications process, and if you get an interview that is even more networking exposure. As Jake said, this program “is not a cake walk,” so you must do as many things as possible to set yourself apart from the rest. ~Cara Macdonald, Contributor

## Failure is an Opportunity

Failure is an unavoidable and an integral part of the learning process. For those who have ever taken an actuarial exam, there is no question that they are extremely challenging; and for those who have not had the privilege yet, please bear in mind that these exams are difficult and that you must be 100% ready before taking them. However, my purpose is not to discourage anyone from taking them. On the contrary, I want to help those who are progressing through the exam process recover from the frustration of failing an exam.

So you've studied for a good amount of hours and are ready to take the test. As you finally submit your answers, anxiousness fills your body as you await your final score. Regrettably, you reach a slide that reads: “You were not successful in achieving the passing score...” You feel your heart sink as you read this and begin wondering what to do next. It is always a disappointing moment when you fail an exam. However, it is important to understand that this is okay; and that this is not that uncommon.

According to [actuary.com](http://actuary.com), the overall pass rate for exam P is 40%, which is usually the first exam undergraduates take. That means 60% of students fail. Nevertheless, this should not be discouraging! A failed exam is a learning experience, and it must be used as a means of figuring out what went wrong and correcting the problem.

Analyzing your studying habits is a must. If you didn't put in enough hours, or were not comfortable with the material, then you need to work on those study habits. Maybe you learned the material, but lacked enough practice. All of these issues must be identified before you progress forward. Be honest if you have not put enough hours into learning the material or doing practice problems. If you thought you did, seek the advice of someone who has passed the exam, and talk to them about your issues.

Also, as you prepare for these exams, it is important to track and schedule enough study time. One of the most common ways students assess the amount of time they spend on these exams is to multiply the number of exam hours times a hundred. For example, the P/1 exam is 3 hours long; therefore, students must study for 300 hours before taking it.

Perseverance is key. Learn from your mistakes. And remember that “Failure is an event, never a person.” ~Roxana Carcamo, Contributor



# Actuarial Science Club



## Club Activities

This has been another successful semester for our Actuarial Science Club. Our weekly meetings consisted of company presentations, pizza with employers, and even a presentation by the CAS President!

All of these activities are aimed at helping students build connections and relationships with each other, increasing opportunities for networking, and establishing a path for their future careers.

During these events, students learned that while they are in college, they should think prospectively about internships and jobs. By creating opportunities to interact with employers, students are also able to practice their communication skills and develop their networking capabilities, traits that are significant and essential not only for their daily life, but also for their future career.

## Introducing the 2013-2014 Club Officers

The new officers (pictured left to right) are:

Nicholas Franzese-Financial Director; Kevin Gregory-President; Alex Shirsat- Administrative Director; Gary Josephson-President of the CAS (Not a club officer); Sydney Storey-Vice President and Audrey Turner-Events Coordinator.



## Explore UT

This semester, the Actuarial Science Club participated in Explore UT- The biggest open house in Texas. This event is aimed at showcasing UT's facilities and programs to members of the state. Hundreds of families, children, and high school students attended this event; and our Actuarial Science Club was eager to teach about probability and math to the incoming wave of kids.

Two probability games were created to do this. They easily caught the attention of many children and parents. One of them was higher or lower, a card game in which kids had to figure out whether the cards being pulled were of a higher or lower value based on past experience. Another one involved guessing the sum of two dice being rolled. A probability distribution curve was created based on the observations, and as more people played, the curve resembled a normal distribution more and more.



Every kid found the games really interesting. Some of them only cared about the prize when they won the game, but other actually used their little fingers to calculate the probabilities and attempted to learn from the games. Parents were also involved in the games and gave hints to their children while explaining to them how probability works.

The parents were impressed by the tabling and thought it was a great way to teach kids about probability and math. They asked club members about the actuarial science club, the material they learned in classes and the kind of jobs they were going to do. Many kids were eager to learn about probability concepts, and many more gained a new interest in math and probability. Who would have thought math could be so much fun?

*~Xin Lian, Contributor*

**University of Texas at Austin Scholarship Winners  
Spring 2013 Actuarial Scholarships**



**Recurring Scholarships**

**Milliman Standard of Excellence scholarship**

Brooke Anderson

**Abacus Learning Institute Actuarial Scholarships**

Keith Cruz

Alissa Levy

**Rudd and Wisdom Actuarial Studies scholarship**

Keith Cruz

Michelle Gregory

Emily Kunkel

Alyssa Levy

Bethany Sims

**Actuaries Club of the Southwest actuarial scholarships**

Bethany Sims

Tatya Widjaja

**Aon Hewitt actuarial Scholarships**

Don Gil Lee

Yue Xu

**Mark and Pamela Callahan (in addition to endowed) actuarial scholarship**

Michael Nguyen

**Ashley and Mark Guajardo actuarial scholarship**

Christine Bell

Long Wu

**USAA Property and Casualty scholarship**

Mohammed Tahir

**SWAF**

Kaari Gerber

Siyuan Yuan

**Endowed Scholarships**

**Mark and Pamela Callahan Endowed Scholarship in Actuarial Studies**

Parker Hurd

**James Morris Dial Endowed Scholarship in Actuarial Studies**

Emily Kunkel

**Bruce Fuller Jr. Endowed Scholarship in Actuarial Studies**

Zhaoyu (Michael) Zhang

**John S. Rudd Jr. Endowed Scholarship in Actuarial Studies**

Cody Carroll

**Eugene Wisdom Memorial Endowed Scholarship in Actuarial Studies**

Jacob Stevens

Sneha Arya

Brandon Valles