

# FISSION & FUSION

NEWSLETTER SPRING 2012



Wayne Davenport, director of development and Dr. Grady Price Blount, Dean, College of Science, Engineering and Agriculture

**W**elcome to the inaugural newsletter of the newly-formed College of Science, Engineering and Agriculture (CoSEA) at Texas A&M University-Commerce. In the summer of 2011 academic colleges were realigned to improve student success; this realignment created two new academic colleges with CoSEA formed from select departments that were formerly housed in other colleges.

CoSEA is made up of seven academic departments: agriculture sciences, biological and environmental science, chemistry, computer science and information systems, engineering and technology, mathematics, and physics and astronomy. Classes are taught on campus as well as at the university farm and observatory.

Our mission is innovation and discovery; we educate students in science, technology, engineering, agriculture and mathematics (STEAM). The faculty and staff of CoSEA have accepted the responsibility of building an innovative framework

to build a better state, country and world. We challenge our students to eagerly compete in a global market with creativity, ethical leadership and imagination. The challenge to every one of our graduates in CoSEA is “don’t just discover the future, make it!”

All programs in the college are dedicated to changing lives with a strong emphasis on challenging opportunities to build solutions, and generating new knowledge for our complex and interrelated world.

If you have not been to Commerce lately please accept this invitation to come back and see the numerous changes that have taken place on campus. This is not the same great university it was when you attended, it is even better!

The dean and faculty of the College of Science, Engineering and Agriculture would love to hear from you, and encourage you to submit your feedback to [wayne.davenport@tamuc.edu](mailto:wayne.davenport@tamuc.edu).

A Member of the Texas A&M University System

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COMMERCE

## A&M-Commerce Celebrates Construction Engineering at Symposium

The Department of Engineering and Technology hosted the Building Information Modeling Systems (BIMS) 4 and 5D Scheduling and Project Delivery Platform Symposium March 2, 2012.

The event was led by **Dr. Gregory Wilson**, assistant professor and construction engineering and construction management faculty member. Construction stu-

dents assisted in the planning and execution of the symposium.

"This event brought together representatives of many of the largest contracting firms in the DFW Metroplex as well as around the country to hear speakers present the latest and most advanced techniques being used in the implementation of BIM," Wilson said. "This event was also developed to bring the highest

level of visibility possible to the university and the construction engineering program through exposure to our BIM laboratory and the students using and learning many of the techniques and software being presented."

Attendees included representatives from the following companies:

Marek Brothers Systems Inc., Balfour Beatty Construction, Hill & Wilkinson, Dee Brown Inc., Rogers-O'Brien Construction, TD Industries, Baker Triangle, Manhattan Construction Company, Hunt Construction Group, Harrison, Walker, & Harper Construction, Hensel Phelps Construction Co., The Beck Group, L3 Communications, and Synchro.

The day's activities included a technical interchange session with presentations from Synchro, Hensel Phelps Construction, and Balfour Beatty Construction followed by a networking lunch.



## Agriculture Science Department Expands Equine Program

The Agriculture Sciences Department is excited about construction on a new covered riding arena. This new facility will feature a 110'X180' riding/educational arena, stalls, tack rooms and wash racks.

The equine program is being expanded under the direction of **Lindsey Johnson**, equine manager.

The primary mission of the equine program at Texas A&M University-Commerce is to provide students with an opportunity to improve their knowledge and skills in horse care, training, proper riding techniques, health, reproduction, handling, and business-related matters. By studying or working at the university's equine facility, students improve their skills and understanding of horses.



Additionally, students learn how farm acreage is managed to produce horse-quality hay, and how natural resources can be used in an environmentally-friendly fashion.

The new equine facility will be used to help Texas A&M University-Commerce accomplish these goals by:

- Providing a covered riding/

training facility that allows classes regardless of weather conditions

- The ability to expand equine science course offerings
- Providing a more up-to-date facility allowing Texas A&M University-Commerce to attract students, visitors and events
- Offering stalls for boarding of student horses

# ACHIEVEMENTS

## Project Dream

In 2010, Texas A&M University-Commerce received the Developmental Education Demonstration Projects (DEDP) grant from the Texas Higher Education Coordinating Board, locally known as Project DREAM. The grant allows the university to provide innovative approaches toward developmental mathematics. The grant is directed by **Dr. Pamela Webster**, assistant professor of mathematics and director of the Math Skills Center, and co-directed by **Mrs. Wendy Gruver**, director of college readiness and student assessment. The two-year grant is worth \$200,000 annually. "State-wide, more than half of all first-time college students require some type of developmental education, and A&M-Commerce students are no exception," Gruver said. "This grant gives us the opportunity to positively impact the success rates of a large number of students both on this campus and across the state."

The A&M-Commerce math department was proud to host the fourth Project DREAM Service Learning Day event. In the classroom, intermediate algebra students were asked to create a plan for a picnic table design, along with a budget and some drawings. The students then built items such as picnic tables, park benches, and arbors that will benefit the university and the town. The projects combined math, writing, and community service for what proved to be a positive student experience.

## BEST Robotics

On October 8, the A&M-Commerce Field House was filled with a level of excitement usually found only at a sporting event. Complete with bands, cheerleaders, and fans, the next generation of designers, innovators, and problem solvers put their skills on display at the second annual BEST Robotics competition. Led by **Dr. Brent Donham**, department head for engineering



and technology, the competition encourages area schools of any size or socioeconomic standing to engage their students in robotics, and provides them with opportunities to compete.

One participant commented "walking into the BEST competition for the first time was a bit overwhelming. It was fun seeing how much each team got into the spirit side of the competition. It's our first year in robotics, so we didn't know what to expect; we just wanted to do well. Now we're excited to get ready for regionals."



**Dr. Carlos A. Bertulani** is a theoretical physicist and professor in the physics and astronomy department. He earned his Ph.D. at the

University of Bonn, Germany. He was an assistant professor (1980-1983) and professor at the Federal University of Rio de Janeiro, Brazil (1988-1999).

## Online M.S. in Biology

The department of biological and environmental sciences has launched a fully online Master of Science degree in biological sciences. The degree program is available to anyone with a bachelor's degree and some background in biology. It is expected that many of the students enrolling will be in-service teachers, especially from Texas Region 10, an area consisting of 80 public school districts, 31 charter schools, and numerous private schools in eight counties (and portions of a 9th) in North Texas. These include Hunt, Dallas, Collin, and other nearby counties.

## Breaking Barriers for Beginning Farmers and Ranchers Program

The department of agricultural sciences, in conjunction with the Texas AgriLife Extension Service and the Hopkins County Professional Agricultural Workers Association, is in the second year of a three-year USDA grant funding a beginning farmers and rancher development program. The program, named Breaking Barriers, provides community-based agriculture and agribusiness workshops specifically for the Hispanic farming community of Northeast Texas.

Dr. Bertulani has published five textbooks on nuclear physics and astrophysics, and edited five additional books. He has taught 56 undergraduate and graduate courses worldwide. His research work focuses on nuclear physics and nuclear astrophysics.

He was a recipient of the John Simon Guggenheim Memorial Foundation fellowship in 2000-2001, and other prestigious awards worldwide.

FACULTY BIOSKETCH

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## GREETINGS FROM THE DEAN



There is nothing as humbling as being selected to build a new college from scratch. This has never been truer than it is today. The futurist and science fiction writer H.G. Wells quipped that all of history is a race between education and catastrophe. Proving that observation, our modern world is delicately balanced on an edge built from science, engineering, and mathematics racing to keep pace with a burgeoning and forceful human population. The simple act of feeding 7 billion people daily depends on an intricate network of agricultural technology built upon an even more interconnected web of computerized transportation, trading, and processing industries. All of it has been made possible by what we call the STEAM disciplines: science, technology, engineering, agriculture, and mathematics.

I suspect that one of the major themes of future history books will be that we are living in an era in which the pursuit of knowledge ceased to be an intellectual luxury and became a very real necessity for human survival. It is not hyperbole to state that the world we live in today could not have existed just a few decades ago. As recently as my own childhood, prominent authors were predicting a “Population Bomb” that would explode when human numbers reached barely half the souls alive today. What replaced that gloomy prediction is a planet on steroids; a hyperworld of integrated globalization that few anticipated. Growth rates plummeted, literacy rates skyrocketed. As the world of tomorrow became the world of today, STEAM disciplines have taken the leading role in improving the human condition and, perhaps paradoxically, creating the world’s first small steps into an urbanized ecosystem. That world will be led by techno-nerds. We happily accept the challenge. Will you join us?

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