Thank you Chairman Hicks, and members, for this opportunity to report on UT Tyler’s initiative to transform teaching on our campus—to truly engage students in their learning process.

Actually, we have four major initiatives under way—each of them reflecting how we value innovation.

First, you are aware that we are adding a self-sustaining, or private, college of pharmacy.

Second, we are adding an engineering center in Houston. Our primary partnership is with Houston Community College, but also with two other junior colleges in the Houston area. Those three feeder institutions have a combined base of 150,000 junior college students to provide top students for our 2+2 program, which allows students to save $24,000 in total tuition costs over the course of their degree.

Third, we are adding a charter school—called the UT Tyler Innovation Academy—to our campuses in Longview, Palestine and Tyler. This teaching initiative uses a model similar to PATSS.
And, the fourth initiative—the one we want to report on today—is our PATSS project to transform the way we teach.

PATSS is an acronym for Patriots Applying Technology for Success and Savings. UT Tyler PATSS courses have two very important elements. First, they blend online learning with face-to-face delivery (50-50 is the target). We’re branding these courses, UT Tyler HyFlex courses.

Second, our HyFlex courses are based on project-based-learning, or PBL, which is designed to engage students in their learning process. It also requires students to discover knowledge and help teach each other.

We are simply responding to two external forces, increases in technology and the fact that students no longer respond well to the traditional lecture format—they have information at their fingertips and want to learn by doing and by hashing it out with friends.

Even before registration, we show students that these classes are going to be different. Every UT Tyler HyFlex course has an advertising trailer for on-campus and media use.

We expect increased learning because PATSS courses have several advantages. The basic material and lecture modules are online, which allows students the flexibility to learn when they are ready to learn—not at a fixed class time. The online materials are
complete and well done. They often become absorbed in the learning process and spend extra time learning. Students can replay online material over and over, and review it before tests.

When in class, students are asked to apply the material in a series of engaging activities. They develop ideas further in their groups and explain it to each other—that’s when real learning takes place. Peer-to-peer learning is a powerful tool. And, peer pressure is a powerful motivation to be prepared.

There is little to no traditional lecture time and the faculty member becomes a course designer, class planner and real-time in-class facilitator. Low-value assessments, such as quizzes, are completed online while high-value assessments are completed in the face-to-face setting.

We fully expect additional learning to be substantial and to lead, in turn, to higher success. That greater course completion will lead inevitably to greater retention.

Indeed, Nobel Prize-winning physicist Dr. Carl Wieman—who has spent the last ten years investigating how better to teach physics and calculus—says this is exactly what happens. We had him visit our faculty last fall. His research (with thousands of data points from Colorado and elsewhere) shows that PBL techniques brought the notoriously high failure and withdrawal rates in physics and calculus down to match the rates of normal courses. I repeat, high
failure rates disappeared.

There are a number of reasons why students will be more satisfied with UT Tyler’s HyFlex courses:

- Fewer in-class meetings;
- Being able to work at home with a cup of hot chocolate;
- Working actively with friends on real situations and applications when in class;
- More flexible academic schedules and work schedules.

But greater success in class; the fact that faculty will have more time for student interaction; and feeling more in charge of their education are three other reasons students are more satisfied.

The financial benefits to students are substantial. They save money by commuting less frequently—a big deal for UT Tyler’s many students who drive an hour each way to class. We believe the better pedagogy and the better scheduling options will get students through faster—yielding a big savings in opportunity costs for students.

The benefits to the University and the State come from the greater throughput of students and better utilization of classroom space. Being able to schedule courses more efficiently makes it possible to potentially save 20%, 30% or even 50% of classroom space—and future construction.
In an experiment this spring, we have three different construction management classes all matched at 9 a.m. MWF in the same room. In a non-PATSS format, each of those classes would meet on all three days. In this format, one class can meet Monday, one Wednesday and one Friday, each at 9 a.m.

UT Tyler is the perfect environment for this experiment. We are mid-sized university (with 7,500 students)—small enough to be nimble and large enough for the test results to matter. Our class sizes are generally smaller and so our courses lend themselves to being converted to the HyFlex format.

More importantly, we are also known for having a high-student-interaction teaching environment and a true penchant for excellence. We’re ranked by U.S. News 22nd in the West among several hundred master’s-level universities, 2nd in Texas and ranked 1st in Texas by our peers.

Our goal is to have the strongest institution with an undergraduate teaching focus west of the Mississippi—and I believe we are going in the right direction. This PATSS effort really just reflects our mindset and goals.

This program is funded by PUF and local funds, as you can see. I want to thank the regents, our chancellor and EVC Reyes for making this important experiment possible.
The available funds will be spent over a 5-year period. We’ve already spent nearly $250,000 on some initial infrastructure needs, such as outfitting a new media classroom to record lecture modules, and adding more online learning support.

We’ve added software that students can use to assess their technical knowledge, typing accuracy and other measures that are key to online learning success—so they know in advance of signing up whether these courses might be right for them.

We trained an inaugural class of faculty last summer in developing the online portions of their classes and learning to change their in-class teaching methods to an active-learning style.

The bulk of expenditures are in the future. Our proposal said this is a five-year pilot project that would begin in fall 2014, but we began a “pilot of the pilot” a full year early. We trained 25 faculty members last summer and offered 49 sections of 31 courses in the HyFlex format this past fall—and reached 1,676 students.

We surveyed our PATSS students at the end of the term. The results were excellent. Students especially liked the organization and pacing of these courses.

Some students said they would still prefer face-to-face only courses, but not many.
Remember, regarding assessment, we’ve only had half a year of a pilot of a pilot. We were trying to get a jump on how to train people to do this. The real project begins this summer and next fall.

In addition, we are working on methods to evaluate and document very carefully any learning successes as well as actual economic gains.

We are excited to see how PATSS will help our students in the future. Our indicators are surprisingly positive for a new venture, and I expect a large number of future courses will be taught in the HYFlex style.