I want to start by thanking co-chairs Greg DeSantis and Bob Brown for putting this conference together. I also want to thank Barbara Richards in her role as vice chair of the Faculty Advisory Committee, along with our colleagues on the FAC and at the System Office, for supporting this event. Finally, I would like to thank our friends here at Housatonic Community College, for hosting today’s conference.

I want to talk today about how Eastern Connecticut State University is using predictive modeling and data analysis to enhance student success and improve graduation rates on our campus. I hope our story might help give you some ideas on how to enhance student success on your own campus.

However, before I share our Eastern story with you, I think it is important to make clear what higher education professionals are up against.
The students who get to our campuses from economically disadvantaged families and neighborhoods are not ready to succeed in college in the same way that the affluent, well-prepared students they sit next to in class are ready to succeed. We need to go back to when those students were infants to really appreciate the challenges they continue to face.

I want to share some research with you that astounds me every time I use it, because it is both obvious and tragic in its simplicity. National Assessment of Educational Progress data shows that, at nine months of age, all infants in our country have the same mental acuity — or intellectual ability — regardless of ethnicity, the educational level of the mother, whether or not the mother is married, or the income level of the mother. All babies in this country are born equally prepared to succeed!

The same NAEP report, however, shows that family income and circumstances soon begin to impact a child. By age two, low-income children are falling behind, and by age 4, the differences are even more noticeable, with as much as a one year gap in mental functioning.
Without the stimulation of books being read in the home, with issues of nutrition and family literacy entering the mix, and with the host of other socio-economic factors that put urban, minority, and low-income families at risk, the children of those families have a hard time succeeding in school.

Across our country, students from our urban core, students of color, students from economically disadvantaged families, and students who are first-generation college students, are statistically at higher risk of dropping out of high school, not attending or completing college, and/or falling below the poverty line. This is true throughout our nation, and it is reflected in National Assessment of Educational Progress tests, which show that these various at-risk populations consistently achieve test scores below their white, suburban, affluent peers. All of us in this room and others have come to know this as “The Achievement Gap.”

This chart shows data from math, reading and writing testing in the eighth grade; testing also occurs in 4th and 12th grade. Note that Hispanic and African American students perform lower in all subject areas.
This is true in the 4th and 12th grade as well, and also parallels comparisons of urban vs. suburban students and various income levels.

What is particularly disturbing—and it continues to be the focus of school boards across our nation—is the reality that the Achievement Gap grows over time. The longer students who come from economically disadvantaged homes stay in school, the worse their academic performance. Rather than helping close the gap, current educational policies and practices appear to be doing more harm than good. Look at this graph showing the growth in the gap between white students and Latino and African American students from the fourth to the eighth grade in mathematics.

What I want to stress here, and the data supports it, is that family income, not ethnicity or race, is the chief determinant of academic progress. For instance, here is a slide that dramatically shows the difference in high school dropout rates based on income. Poor students are more than five times as likely to dropout as their affluent counterparts.
The same difference shows up later on in terms of college graduation rates. Almost 60 percent of the most affluent students graduate from college within six years. For students from the poorest families, that rate drops to less than 10 percent.

So let’s take all this data, and bring it down to the experiences of college freshmen who are not ready for the academic rigors of college level work. They come to campus, lucky to have survived their neighborhoods, fortunate to have graduated from high school, and thankful for the chance to succeed in college. But they are not ready to succeed, and national data shows that college students are at the greatest risk of dropping out during the first six weeks of their first semester. Identification and support of these at-risk students has to occur early in their college career if they are going to succeed.

Given the reality that many students come to our campus ill prepared for success, we examined our support services at Eastern and realized they needed to be improved to identify and support at-risk students. This review was in the first year of our 2008-13 Strategic Plan, the second year of my presidency. We have made much progress since then and I would like to share that with you.
Our improvement model at Eastern has been grounded in two realizations—we needed to improve the academic support services we provide students, and we needed to have a much clearer idea of the skill deficits of entering students, so that we could better match their needs to our services.

When we looked at our services, we found that our students were not satisfied with advising services. We realized we needed to do a much better job in identifying at-risk students—even before they enrolled. We needed to bring our academic support services under one roof. We needed to support faculty advising through professional development.

The title of my remarks is “Success Starts with Knowing Your Students.” Even as we were improving academic support services on our campus, we knew we also needed to improve the way we gather and analyze data about our students to help match their needs to the improved services we were committed to provide. The ultimate goal was to improve retention and graduation rates among our most at-risk students, as well as seeing an overall improvement among all our students on those two key metrics.
This chart is a lot to absorb, so I will do my best to summarize. In the middle of our commitment to student success are services directly related to academic success: tutoring, advising, and related services. That is the middle circle colored in purple on this chart. The middle circle in blue are all of our Student Affairs Offices and Academic Departments. This is our way of saying supporting student success and being accountable to our retention and graduation goals is a campus-wide job—it’s everyone’s responsibility. The outer circle in yellow represents some of our triage services for high risk behaviors—drug and alcohol abuse counseling; personal counseling; health services.

You will also see student clubs in that outer circle. National data, as well as our own experience, has shown that engaging students through student clubs and other campus life activities improves retention and graduation rates.

We could not have moved ahead on our new model for Student Success at Eastern Connecticut State University without outside financial support. We used a four-year “Project Compass” grant from the Nellie Mae Education Foundation and a Title III grant from the U.S. Department of Education to jump start our program.
The result of all this grant support was the development of our Academic Services Center, which we created on the ground floor of our library. It houses all advising, tutoring, math and writing labs, supplemental instruction and special academic services and programs; today it serves more than 2,000 students a year with more than 10,000 total annual visits. We use professional and faculty advisors, as well as faculty and student peer tutors.

Our research, as well as student feedback, also prescribed a new advising system that combines faculty and professional expertise and creates advising stages throughout a student’s college career. We now have a four-tiered advising system of faculty and professional staff advisors for Pre-Enrollment, Major Selection, First-Year, and Career Development advising.

We also created an “Early Warning Team” of housing staff, support services staff, and faculty to identify at-risk students early on in their first-year experience.
Whether it is a resident assistant noticing erratic behavior in the dorms, a professor documenting a student missing class, or other warning signs, our notification system allows one person on the team to trigger an alert to all members, so that appropriate interventions and support can be made available.

The literature and our own experience tells us that students of color perform better when they see their own cultures and heritage reflected in the ranks of faculty. With changing demographics bringing more ethnic minorities to our campus, it was critical that we hire more minority faculty. At the same time, we know that having a diverse faculty is good for all students, promoting the global perspective and respect for other cultures that is needed in today’s world. Through extra efforts to expand search pools and other proactive hiring practices, I am proud to tell you that Eastern has the highest percentage of minority faculty of any college or university in Connecticut, including UCONN, Yale—everyone.

We have also dramatically increased the sophistication of our data collection and analysis, using multiple variables to predict students who are at academic risk and match them to appropriate support responses.
“Know your students!” Make this a priority on your own campus; if you do, you can start to feel confident about implementing the right corrective interventions for each student.

One major aspect of this development of our data system was the creation of four “Targeted Advising Cohorts” or TACs. Based on where a student falls into the four quadrants, we initiate interventions ranging from simply monitoring progress to intensive tutoring support.

Here is a list of the various variables we are using to identify at-risk students. While I won’t read them all, they vary from a student’s GPA to whether or not he or she is a student is an athlete, has an undeclared major, or commutes to school. Socio-economic factors—ethnicity, family income, and whether or not a student is the first in their family to attend college—are also included.

This chart shows how different variables impact retention, credit accumulation, GPAs, and other success measures. The point here is that we realized we needed to take the time to systematically assess the impact of multiple measures on the advising cohorts we had created.
I think everyone in this room is dealing with the economics and public sentiment surrounding the fact that it takes four-year college students an average of 4.7 years (full time status) and 5.6 years (part time status). Our own research suggests it costs a student and his/her family $75,000 a year to attend additional years of college. That’s loan interest, living costs, delayed earnings, and other economic factors. And we all are measured by our four-year graduation rates. How can we help students graduate in four years? At Eastern, we have created an “Eastern in 4” program that requires freshmen to work with their advisors to create four-year academic plans. The program is also proactively removing barriers to course completion, and we have replaced “undeclared” status with a set of five exploratory tracks. We started the program two years ago, and I think it has all the elements it needs to be successful in increasing our four-year graduation rate and getting students onto their career paths more quickly.

So what have we learned through implementation of our student success model? We knew going in and we have reaffirmed that retention must be a campus-wide commitment; you cannot succeed by creating a single retention office.
Those realizations have also been supported by quantitative measures. A little over three years ago, the Education Trust, an education advocacy group in Washington, DC, announced that Eastern ranked **number one in a national study** of the improvement of six-year graduation rates of Latino students among public universities and colleges.

This chart shows that the six-year graduation rate of Latino students at Eastern almost tripled, from 20 percent in 2004 to 57.8 percent in 2010.

This chart compares Eastern’s progress to all public institutions and all four-year institutions. We outperformed other schools in this survey by 10 to 1! I would like to think this is an indication of the success any college or university can have when it takes a systematic, thoughtful, and data-centric approach to its work.

In addition to the dramatic improvement of student success among our Hispanic students, we have seen other upticks in our success measures:
40% of our students are taking advantage of the Academic Services Center.

We are well on our way to achieving our goal of 100% of freshmen with a four-year academic plan and a declared major by their sophomore year.

Our four- and six-year graduation rates are at all-time highs, and are the highest among Connecticut’s state universities.

We continue to use data and anecdotal experience to help us improve our systems and processes, so that our success is not short-term, but instead is institutionalized and leads to long-term gains in student learning.

I want you to think of what I have shared with you so far as the systematic, quantitative approach we have used to “knowing our students” and responding to their needs in terms of cohorts — groups of students with similar needs.

But the fact is, we also realize in our inner cities, among the urban poor, and for many minority families, each student’s circumstances is complex. Family, neighborhood, culture, high school—every corner of a person’s life impacts them in a dynamic fashion and each student reacts differently to academic support interventions.
We have learned that academic measures alone do not give us all the information we need to assess a student’s progress and ability to learn. Emotional well-being, motivation, and other psychological factors must be understood. I encourage members of the audience to examine the area of the education literature dealing with “Resilient Students” to learn more about how at-risk students, especially those from inner-city or economically disadvantaged backgrounds, deal with changes in their environment. I can get you those references if you are interested.

One project we have had great success with in terms of supporting inner-city students as they adjust to campus life is our Dual College Enrollment Program, wherein we recruit students from Hartford’s three high schools—students without plans to attend college—and then have them take developmental courses at our local community college before enrolling full-time at Eastern, all the while living on our campus. We are enrolling our ninth cohort of students this fall, and the success of students in the program has been inspirational for our entire campus.
Since its inception, the key to the program has been to find high school students who, while they might not have great GPAs, solid SAT scores, or a clear plan to attend college, have the potential to do well — a spark.

When I personally visited two counselors at Hartford Public High School in 2007, I asked them if they could identify students who had such a spark. Jeff Bartlett, the lead counselor said, “Yes!” Jeff “knew his students!” But he and I also knew it wasn’t going to be easy. Two-thirds of the students at the school are Latino, one-third are African American, and there is a smattering of Caucasians. Ninety percent of the children at the school are living below the poverty line. This was where the battle for survival was being waged.

Jeff and the other counselors at the high school assured me that they could find a small cohort of students (10-12 seniors a year) who might not have the academic qualifications to meet our normal entrance requirements or have any intention of attending college, but who had spark, motivation and the potential to succeed with sufficient support.
I then convinced the president at Quinnebaug Valley Community College — our local community college — to partner with me to provide remedial coursework in the first semester of these students’ programs so they would be ready to hit the ground running on my campus by their second semester.

In fall 2008, we started the “Dual College Initiative,” with the students living on my campus, taking one course at Eastern and 3-4 remedial courses at the community college. They are given work-study jobs on our campus, and encouraged to immerse themselves in campus life. We also make sure that these students take full advantage of all the student support services available to all students—our peer tutor program; supplemental instruction in math, reading, and writing; professional advisors; and financial aid. And we provided the personal touch of mentors for each student. It sounds like a well-thought out program, but we have had our share of growing pains and “A-ha!” moments.

I am so proud of the faculty and staff on my campus who have gone the extra mile to give each of the more than 100 students who have moved through this program the personal attention they needed to succeed.
And I am grateful for the financial support we have received from all points on the compass — from the WalMart Foundation; from the U.S. Department of Justice; from local foundations and other generous donors.

Keep in mind the students in this program come from violent neighborhoods and broken families, without any college graduates in their families to serve as role models. Many of the students are first-generation immigrants—learning to speak English was just one of many challenges they have faced in coming to this country. So for me to tell you that the program’s graduation rate is far above the overall figure for students graduating from Hartford Public High School is astounding. For me to tell you that we now have graduates of the program in master’s degree programs in clinical psychology, social work, and counseling is astounding. For me to describe other graduates working as family health outreach coordinators, human services specialists and cultural center directors at the University of Connecticut is astounding!
This program reminds me of the importance of looking deeper to find someone’s potential, not just what they may be able to show you on paper. It also tells me that we can save lives from our urban core with a systematic approach tempered by a personal touch. With these investments, we can lift young people up and give them a future.

Keep in mind it is not just their future we are talking about. Yes, the personal impact of education is enormous. Data shows that in Connecticut alone, if we were to increase the graduation rates of Latino and African American college students to the rates enjoyed by white students, it would provide an additional $8 billion a year – I said billion!—in personal income for those graduates.

In addition to this personal benefit, keep in mind the social and economic benefits of an educated citizenry. Twenty-five years ago, America had the highest percentage of adults with a college degree in the world; today we are only 14th. That is why the College Board has an aggressive goal of increasing the percentage of Americans with at least a two-year degree from the current figure of 41% to 60% by 2025.
Why does this metric matter? The Center for Education and the Workforce at Georgetown University projects that 66 percent of the jobs in Connecticut over the next 10 years will need at least a two-year degree. With changing demographics, this growth in educational attainment will need to come from the populations previously not enjoying the benefits of a college education—Latinos, African Americans, low-income families, and people living in our urban core.

While we attend to this challenge in Connecticut, keep in mind that the same data showing the growth of personal income if more minority students in Connecticut graduate from college also shows that if we were to see Latinos and African American college students graduating at the rates enjoyed by white students across our entire country, it would raise our nation’s Gross Domestic Product by $1.2-$2.3 trillion. Student success on our college campuses must be a national priority!

I don’t want to leave you by thinking about economic data and national priorities. I have been talking about ways to ensure that more of our students succeed on our campuses. Each of these students is a real person, someone with aspirations, with challenges, with skills, and with areas they want to improve.
At Eastern, we are small enough to be able to focus on each student, especially those who are at-risk. We not only provide an array of services, we try to mentor those students and let them know from day one, that **they matter** . . . and that **we care**. Let me show you a brief video that allows some of the students in our Dual College Initiative to tell their story of success in their own words.