



**Address at the Beacon Council's Access Breakfast**

**Given by Mark B. Rosenberg  
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Good morning! Thank you for the opportunity to speak about what's next as it relates to our FIU. What's next relates to the broader national and international question informed by the World Economic Forum in its Global Competitiveness Report. "Education and training have emerged as key drivers of competitiveness, ensuring that the labor force has access to new knowledge and is trained in new processes and the latest technologies". "A country's ability to absorb new technologies, to produce goods and services that can reach standards of quality and performance acceptable in international markets, to engage with the rest of the world in ways that are value-creating, is intimately linked to the quality of its schools, to the priority given to training in mathematics and science, and to the existence and accessibility of specialized research and training centers."

Who will forget that at the height of the great recession, January 2010? The jobless rate was 9.7%; for individuals with a bachelors degree or higher the rate was 4.9%. And for individuals who lack a high school diploma, the rate was 15.2 percent. We all want this dynamic region to be a world-class place to live, work, establish a business, raise a family, and leave a legacy.

We all want the same thing, and our FIU plays an important role. In the next few moments, I will spend some time on who we are, what our product is, on our community strategy, on the research and development we do and on our plans for growth and expansion. We see our university as a solutions center for the community. Our mission is intimately linked to our geography and our demography. Our geography and our demography are our destiny.

We understand that we are a beacon of hope and opportunity for this community. We see ourselves as a force for good. We understand that we have a sacred obligation to prepare our students to make a good living. To either take a great job or to create a great job. We also understand that we must prepare our students to make a good life. The life of the mind is also about aesthetics, ethics, civic engagement and social responsibility.

As an anchor institution, we are willing to take responsibility for our community. We are committed to providing access to higher education and to provide high quality educational opportunity to all young people in our community who have the preparation, drive and determination to pursue a university degree.

There are 45 high schools in Miami Dade County, we want graduates from each of these schools. We cannot turn our backs on some students because of the accident of birth in zip codes that have low income populations. So what does FIU look like today in terms of students?

- We enroll nearly 54,000 students.
- We are the country's fourth largest public research institution in terms of enrollment.
- We are the country's largest majority-minority university.
- We are the shape of things to come for public universities in the US.

We graduate nearly 12,500 students annually. In the next ten years, nearly 130,000 students will graduate from FIU. Most will stay here in Miami. Our graduates are among the best paid in the State University System. According to the latest figures, most of our students who graduate with bachelor's degrees find jobs within a year of graduation. On average, they earn close to \$40,000 a year at those jobs. Most of our master's degree graduates find jobs as well. Their earnings after graduation average \$60,000 a year.

We hold the #1 ranking for the percentage of IT-related graduates employed in the state of Florida in their first year after graduation. We award more bachelor's degrees to minorities than any other university in the country. We're a national leader in awarding STEM degrees to minorities. We award more than \$140 million dollars each year in scholarships and financial aid. We spend more than \$85 million dollars each year on goods and services from local businesses.

For FIU, education means jobs in another important way, we create jobs. FIU has more than 8,000 faculty and staff, we are one of the top 10 employers in Miami-Dade County. We have created 1,000 new high-paying jobs in the last five years including over 500 new faculty members. For this academic year, we have hired 74 incremental faculty and 131 new administrative employees and staff.

The average annual salary for our new 9-month faculty is \$76,067 (\$66,845 average for 12-month faculty). The average salary for our Administrative employees is \$56,527 (\$33,018 for new staff members). Our new professors at the Herbert Wertheim College of Medicine average \$169,600 a year. Thirty-five percent of Miami-Dade County public school teachers are FIU graduates. Thirty-seven percent of Miami-Dade County public school administrators are FIU graduates. All of these are people who live and work and spend right here in South Florida, adding to our prosperity.

We have also helped create jobs within the community. Since 2009, we have started and completed or started and/or have under contract \$349 million in construction. This

includes nearly 250,000 feet of state-of-the-art science research facilities. The \$349 million translates into about 6,000 construction jobs. Also consider that the \$349 million includes investments in Health Care, Research Labs and Classrooms.

Those investments are expected to create permanent jobs because of greater student access, improved retention and graduation rates, research enterprise development and innovation. This could mean another 2000 to 3000 jobs over the next few years. Those are just some of the ways FIU is having a positive impact on our community and our workforce.

Two of my commitments when I was named president: (1) Grow and link research to local economic development and problem-solving emphasis on community priorities (2) Tie instructional and creative initiatives to local needs and long-term community priorities, especially in the professional schools. In essence how to make FIU into a solutions center for our community. As a solutions center for our community, we believe in the power of what we call win-win partnerships. Let me highlight four partnerships:

1. ACCESS with Miami Dade County Public Schools:
  - 20 working groups
  - Dual Enrollment expanded
  - Education Effect – partnerships with Northwestern and Booker T.
  - Teach for STEM
  - New MAST Academy at BBC
2. Ultimate Software:
  - Over 50 internships of students from Engineering and Computing
3. RCL
  - Building a 120,000 sq. ft. facility at BBC that will enable our Theater and Music departments to work with RCL in training and preparing their shipboard entertainers.
  - 20 internships for FIU students.
4. FPL
  - Opened a call center at FIU that is ran by FIU students that will likely then be offered full time positions.

The predominant driver of GDP growth over the past 50 years has been scientific and technological advancement. Job creation on a large scale requires growing the nation's GDP. An essential element of our efforts as a university relates to research. The Federal Government is the major funder of research. In the OCOG assessment prepared by

Avalanche Consulting, residents were asked to describe the most desirable types of business operations for Miami. Headquarters and R&D operations ranked the highest. Both the target industry and business operations questions scores show that Miami Dade County residents are interested in clean businesses that complement the area's lifestyle and, for the most part, employ higher wage, well-educated, creative professionals.

At FIU, we are building new facilities. We recently completed two buildings that make up part of our Academic Health Center; the 136,000-square-foot Academic Health Center 4 and the 120,000-square-foot Academic Health Center 5. Although these buildings are not yet fully occupied, significant research is already taking place in them. The research includes areas such as:

- Mental health, including ADHD, Anxiety and Autism Disorders.
- Brain mapping, Alzheimer's and other brain-related research.
- Aging and neuro-cognitive disorders.
- Biomedical engineering.
- HIV/AIDS.
- Adolescent substance abuse.
- And research by our Extreme Events Institute and International Hurricane Research Center.

For the current fiscal year this represents approximately \$54 million in research funding from federal agencies such as:

- the National Institutes of Health (NIH),
- the National Science Foundation (NSF),
- the US Department of Education,
- the National Oceanic and Atmospheric Administration (NOAA),
- the Coulter Foundation,
- the Ware Foundation,
- and the Florida Department of Public Health.

We are also working on a strategic plan to support FIU's research growth goals while taking these elements into account. We are committing resources to strategic research areas.

Technology transfer is key to our research efforts. We want to increase these efforts through faculty recruitment, fund raising, industry partnerships and the creation of an incubator. We know that our win-win partnerships are the key to research growth and job creation. We seek to join the expertise of our faculty with the expertise of industry leaders to move groundbreaking research forward and change the lives of people in our community and beyond.

As you can see, we are a public institution that forges win-win partnerships in our community that engages in problem-solving research and prepares our graduates with the skills they need to compete. FIU's success is our community's success. FIU has made great strides in initiating and expanding programs in the areas identified by One Community One Goal as crucial to building the responsive 21st Century Workforce.

We presented a 12-page summary on July 23, 2014 to the Beacon Council of our efforts this year. Let me share highlights from the 6 areas:

1. Creative Design

- Initiated the inaugural Discover Design in South Beach program, funded by Knight Foundation, to develop the next generation of creative thinkers in the arts and design.
- Established an Innovator in Residence Program who will work with J&MC students to develop groundbreaking media projects and new courses and teaching techniques in digital media.

2. Hospitality and Tourism

- We opened a new Brewing Science Laboratory in our Chaplin School. The lab will be used for industry research. Only a handful of universities in the United States have such a facility. FIU's is the only one in the state of Florida. But we don't only brew beer! Now there is groundbreaking research to make wine and beer a little healthier. The problem starts where ochratoxin is secreted by a vineyard mold. It's a mold that grows in a warm and humid environment, and when the grapes are crushed, the ochratoxin is emitted and gets into the wine. Ochratoxin is regulated in Europe, but not in bottles of wine from the US. Dr. Aaron Welch, an expert in this field with background in molecular and cellular biology, and his team are trying to genetically alter the yeast to also kill the toxin.
- This year, FIU was chosen by the Department of State's Bureau of Educational and Cultural Affairs (ECA) through a competitive process to be one of only 20 Washington Fellowship host institutions that represent the excellence and diversity of U.S. higher education. This summer FIU hosted 25 young fellows from sub-Saharan nations in a public management institute as part of the Young African Leaders Initiative (YALI).
- Our College of Arts & Sciences is organizing an international conference on Roots/Heritage Tourism in Africa and the African Diaspora to be held on February 12,-14, 2015.

3. Information Technology

- School of Computer and Information Sciences is promoting an accelerated master's degree in IT in a hybrid format to implement IT solutions in high impact areas like security and networking.

- School is also recipient of a Targeted Educational Attainment grant from the FL Board of Governors titled “An urban university coalition response to Florida Computer information technology workforce needs”, which aims to increase our IT graduates by 50% in next five years.
- Partnered with Technology Foundation of the Americas to host eMerge Americas Techweek, where we featured our top research initiatives.
- Acquired Aquarius is the world’s only underwater sea laboratory that also hosted Fabian Cousteau in his record setting 31-day dive.
- Created Robocop, a real life telebot that can help disabled police and military personnel continue to work.
- Our new head of Computer Sciences, Professor SS Iyengar, was named a fellow of the American Academy of Inventors. He is a national expert in sensor networks and image processing.

#### 4. International Banking and Finance

- In partnership with FIBA, AMLCA (anti-money laundering certificate) was offered throughout the year. It was taught in DR, and on-line to hundreds of banking officials.

#### 5. Life Sciences and Healthcare

- LSSF collaborated with BioFlorida for its inaugural Latin America & Caribbean Life Sciences Conference, which took place at FIU’s MMC on March 28, 2014. Over 140 individuals, most of whom do business in Latin America, attended the conference.
- The second annual LSSF STEM Undergraduate Research Symposium took place at FIU on April 12, 2014. There were 188 people in attendance. A total of 70 student presentations were comprised of 58 poster and 12 oral presentations.
- We received major funding from the National Science Foundation for the groundbreaking work on a new ovarian cancer treatment that uses externally programmed “smart” nanoparticles to target cancer cells with unprecedented high specificity. The \$405,000 grant will help further research by the team of the principal investigator (PI) Sakhrat Khizroev, Ph.D. He is a Professor of Cellular Biology at the Herbert Wertheim College of Medicine and a Professor of Electrical and Computer Engineering at the College of Engineering and Computing. His Co-PI Carolyn Runowicz, M.D., is a Professor of Gynecology and Obstetrics and Executive Dean of Academic Affairs at the Herbert Wertheim College of Medicine.
- Researchers in FIU’s Adaptive Neural Systems Laboratory (led by Dr. Ranu Jung) have developed an advanced prosthetic system that will provide sensory feedback to upper extremity amputees using sensors embedded in the prosthetic.
- Scientists at our Center for Advanced Technology and Education (CATE) are performing pioneering work on the use of neuro-navigated Transcranial

- Magnetic Stimulation. This is a powerful tool for mapping the eloquent cortex of the brain that also provides great potential for new insights into brain disorders. This is in collaboration with MCH (instrumentation).
- You may have read or seen national television reports about FIU's Dr. Aileen Marty. She's a professor of infectious diseases at our Herbert Wertheim College of Medicine. We just welcomed her back home after she spent 31 days in West Africa, on the front lines of the worldwide war against Ebola. The World Health Organization asked her to serve with their Global Outbreak Alert and Response Network. The current outbreak of this devastating disease – has killed more than 2,600 people, sickened thousands more, and destroyed families in its wake. During her time in Nigeria, Dr. Marty was instrumental in setting up entry point controls in an effort to contain the epidemic and prevent new infections. She also treated patients and met with government and private industry representatives in an effort to organize the resources necessary to eradicate Ebola. Dr. Marty is a Navy veteran. She is passionate about helping others. She is a shining example of how FIU's professors are committed to changing the world and are using their skills to bring about that change.
  - Our FIU Herbert Wertheim College of Medicine has created a comprehensive, integrated care model, FIU EMBRACE. FIU EMBRACE was created to provide medical and behavioral health care to adults with autism spectrum disorder and other neurodevelopmental disorders. Our doctors treat these patients with their specific needs in mind. Our care philosophy recognizes that people with developmental disabilities deserve to be treated as individuals with personal patterns of talents and challenges. This is just one more way our medical school is breaking barriers for the good of our community.
  - FIU associate professor of physics Angela Laird has been named one of the world's most highly cited researchers by Thomson Reuters in its "The world's most influential scientific minds of 2014" report. Dr. Laird is one of only 15 Florida researchers on the list. She is director of our Neuroinformatics and Brain Connectivity Laboratory. That's her area of expertise – neuroimaging, or brain mapping. She's helping us better understand the brain and, as a result, psychiatric and neurologic diseases or disorders of the brain.
  - Dionne Stephens is one of our psychology professors. She is a recipient of the American Psychological Association's Carolyn Payton Early Career Award. Recently she also was awarded the Global Health Equity Scholar Faculty Fellowship. That's a prestigious program that seeks to generate a team of global health researchers who will address the new challenges in global health. Dr. Stephens' research examines the ways in which culture informs individuals' sexual health decision-making processes and outcomes. With a particular focus on the relevance of gender and ethnic/racial identity

development she has explored such issues as intimate partner violence, sexually transmitted infections, and sexual messaging in popular culture.

- Raul Gonzalez is an FIU grad that is back at his alma mater as a researcher. Dr. Gonzalez, a psychology professor, has dedicated his career to understanding what makes people vulnerable to addiction. He is the director of the Substance Use and HIV neuropsychology Lab. He has two projects funded by the National Institute on Drug Abuse, which last year also honored him with the Outstanding Early Career Investigator Award. As a licensed clinical neuropsychologist, he studies the relationship between the brain and behavior of HIV positive and negative individuals who also suffer from substance abuse problems. His research looks at the ways the disease and/or the addiction affect an individual's ability to make decisions. He is also part of the team of researchers at our Center for Children and Families. Dr. Gonzalez's goal is for his research to eventually improve people's lives.

#### 6. Trade and Logistics:

- Launched Masters of Science in Engineering Management (fully online) that offers a fast-track to engineering leadership by developing managers who understand both the engineering and business aspects of technology. This program can advance our students' engineering career with an accelerated 10-month program that combines technical, law, and business courses.
- Then there's the groundbreaking or, rather, bridge-building work of FIU professor Atorod Azizinamini. We call him "Dr. Bridges". He's the chair of the FIU's Department of Civil and Environmental Engineering and director of the Accelerated Bridge Construction University Transportation Center. Last year, U.S. Department of Transportation awarded FIU a \$1.4 million grant to work on one of the nation's leading challenges, deteriorating bridges, under Dr. Azizinamini's leadership. The Accelerated Bridge Construction University Transportation Center at FIU is the first federally funded entity focused on developing technology and methods to improve and accelerate the construction of bridges. Dr. Azizinamini has spoken to decision-makers, including our South Florida Congressional delegation about this crucial issue of accelerated bridge construction and FIU's role in making it a solution to our country's aging infrastructure.

FIU's other major initiatives includes:

- Talent Development Network - Working in partnership with ALC and OCOG, we have conceptualized and launched the One Community One Goal Talent Development Network. The purpose is to stop brain drain and keep talent in our community. We know that attracting and retaining young, talented and creative people in Greater Miami will grow the economy faster than other more traditional measures of economic development. The Talent Development Network will build a shared technology infrastructure for students and

employers. We have hired a program lead, Steven Rojas Tallon and we are working to launch internships next summer.

- FIU internship initiatives - According to the National Association of Colleges and Employers, 63% of 2013 college graduates who participated in a paid-internship received at least one job offer. Compare that to the 35% with no internships and 37% with unpaid internships who received job offers. 79% of interns accepted a full-time job offer with their internship employer. 75% of new college hires that had retained internship experience were after one year.
  - According to a Knowledge@Wharton report from July, the average starting salary of graduates with a paid internship was \$51,930. For graduates with no internship experience, it was \$35,721 and \$37,087 for graduates with unpaid internship experience.
  - At FIU we have had success in expanding internship opportunities. In the past academic year 4,737 students participated in internships. That's a 13 percent increase from two years before.
  - Our internship and career fairs attract top companies that include Marriot, Pepsi, Hertz, JPMorgan Chase, Deloitte, Ryder, Chrysler, Wells Fargo, and many more. We also are proud that federal employers such as the FBI, Peace Corps, NASA, the Secret Service, Department of Energy, Department of Defense and the Department of State come to campus to recruit our students. Miami-Dade County and local municipalities also recruit and hire our students.
  - We are finding innovative ways to help our students secure internships. We have a university-wide internship portal. This portal provides students direct access to internships. It also allows employers to register and establish internship opportunities. This portal ([internships.fiu.edu](http://internships.fiu.edu)) is opening up opportunities to thousands of students. The education we provide to the young people of South Florida translates into jobs. Education means jobs.
- FIU Expansion - To increase our capacity to provide a world-class college education to a greater number of young men and women, we must grow. FIU is on the cusp of doing even greater things. Our proposed expansion onto the 64 acres adjacent to the FIU Maidique campus will enhance our ability to create new jobs for the South Florida economy. We'll be able to produce greater student talent in engineering, the sciences, and entrepreneurship-areas that are state priorities and keys to economic development.
  - Our proposed use for the land includes expansion of our academic space, including the College of Engineering and Computing. Other uses being considered include: research space, our academic health center, an incubator to support entrepreneurship, and student housing and support space, as well as parking.

- This initiative is important for our institution and our community. Here's what FIU's expansion will mean:
  - An initial economic impact of \$1.8 billion and an additional annual recurring economic impact of \$541 million to our community. That's above the \$8.9 billion FIU already provides.
  - Job creation to support FIU's expanding student population.
  - It will be done at no cost to Miami-Dade County or our students.
  - We will raise funds for the expansion without affecting tuition.
- Earlier this month, the Miami-Dade Board of County Commissioners approved a Memorandum of Understanding with FIU, laying out the framework for a transfer of the Fair property to FIU. For more on our expansion plans, I encourage you to visit [expand.fiu.edu](http://expand.fiu.edu).
- This is about the greater public purpose. This is about a win-win-win solution for everyone involved. We're excited about FIU's future, which will impact the future of our entire community and our workforce. We won't do it alone.

We need the support of the leaders in this room. We need you to support the good work FIU is doing for our students and our region.

Help us continue to be a beacon of hope and opportunity for South Florida, one that generates good jobs for South Florida and educates the talented people who will fill those jobs. The consensus in our community is that world-class cities deserve world-class universities.

Help us build a world-class university.