Higher Educational Facilities
Return on Investment

This is a tool developed by a collaborative group of stakeholders designed to facilitate the identification of return on investment metrics for higher education facilities. Check any box(es) that apply, provide a quantitative explanation, and identify the term or years in which ROI information is provided.

Institution: New College of Florida
Project: Heiser Natural Science Addition
Total Project Cost: $ 8.9 M
Previous Funding (State): $ 655,000
Current Request: $ 5.3 M
STEM (Yes or No): YES
Contact Person (Alan Burr, Director of Facilities and Construction, 941-487-4694, aburr@ncf.edu)

Check any box(es) that apply and provide a quantitative explanation. Identify the term or years in which ROI information is projected.

1. ☒ Number of Additional Degrees and Certificates Produced and How Those Degrees are Meeting the Needs of our State (Job Openings, Average Wages of those Job Openings, etc)

   Explanation:
   2013-14 Enrollment in majors in the Biology, Chemistry, Computer Science, Data Science, Mathematics, and Physics was 208 students. We expect enrollments in these majors to increase by 10% by 2018 (20 students) and 20% by 2020 (40 students).

   The percentage of New College of Florida bachelor's degrees awarded in STEM majors in 2014 was 34% (49 STEM degrees). By 2020, we expect the percentage of New College of Florida bachelor's degrees awarded in STEM majors to increase to 41% (74 STEM degrees)

   New College of Florida graduates the largest percentage in the SUS of undergraduates who go on to earn PhD's: 14.5% for NCF compared to next highest (UF 1.7%) and the SUS average of 1.5%.[1] Thus a critical payoff of the Heiser Addition will be the undergraduate training of a significant number of Florida's future Ph.D. scientists.

[1] Source: National Opinion Research Center (NORC) at the University of Chicago, Survey of Earned Doctorate (SED)

2. ☒ Number of Additional Students Served and the Benefits/Efficiencies Created (increase graduation rate, alleviate waitlist, increase academic support, etc)

Explanation:

The Heiser Natural Sciences Addition will provide additional space for student learning and research and faculty teaching and research in these disciplines: Biology, Chemistry, Computer Science, Data Science, Mathematics, and Physics. In Fall 2014, 472 students (57% of the student body) took at least one course in Natural Sciences.

At New College, professors work directly with undergraduate students, unmediated by graduate teaching assistants and postdocs. Research laboratories in the Heiser Addition will be the loci of high quality advanced teaching, where students work collaboratively on open research problems, learning while doing actual science, and working collaboratively with the professor, and more advanced students will mentor less advanced students. This research lab set-up is the reason that New College and similar high-quality, very selective, primarily undergraduate, residential colleges out-perform research intensive institutions and produce such a disproportionately large share of the nation's scientists.

With the addition, we will be able to teach more students in laboratory courses. Our current science laboratories only hold 14-24 students, requiring multiple sections of laboratory classes staffed by adjuncts and other instructors. The new addition will allow the College to accommodate 360 more students per semester in biology, chemistry, and physics laboratories in the three new 24 station teaching laboratories. A larger number of slots in laboratory classes each semester will help students complete their graduation requirements in a shorter time. New science laboratories are likely to improve retention of first year students taking introductory laboratory classes in the sciences.

3. ☒ Amount of Additional Research Funding to be Obtained; Patents Awarded

Explanation:

The Heiser Addition will allow NCF to at least double externally funded faculty research. Currently, some professors do not have the research space needed to successfully compete for extramural funding. At New College, all research money directly benefits undergraduates, who get advanced training in science and go on to contribute to Florida's research efforts. Between 2010 and 2014, 85 undergraduate New College students were directly involved in externally funded research projects.

4. ☐ Project is in an Area of Strategic Emphasis as Determined by the Board of Governors' Gap Analysis or the Department of Economic Opportunity's National Occupational Forecast

   Explanation: N/A

5. ☒ Improves the Ranking of a Preeminent Program or Improves on a Performance Funding Model Metric

   Explanation:

   We expect to improve two Performance Funding Model metrics once the new building is completed. First, the new teaching and research laboratories will provide more space for students to complete their science degree requirements. New College has the second highest SUS percentage of bachelor's degrees awarded in STEM disciplines; NCF Work Plan sets the goal to increase undergraduate degrees in STEM to 32% by 2016-17 and has already surpassed this goal at 34% in 2013-14. With the new space, we can set our STEM goals even higher.

   Second, the six new research laboratories will provide space for new science faculty to do their research and supervise undergraduate student research projects, which are a required part of the New College curriculum. The new science equipment that will be purchased for the new building will help students complete their degrees in a shorter time frame, improving our six year graduation rate. Each research lab will be able to accommodate 4 to 6 research students, leading to 24 to 36 more STEM graduates per year.

6. ☒ Increase Business Partnerships Which Will Lead to Guaranteed Internships and Jobs for Students

   Explanation:

   The new Data Science masters program (which will be housed in the Heiser Addition) has business partners that will provide guaranteed internships for the students during their second year in the program, and these internships are expected to lead to lucrative jobs that will benefit the state. When the new building is completed, the masters program will be completely developed, and there will be 15 students each year in internships, and these students will graduate at the end of each year to enter the workforce.

   These Florida businesses have expressed interest in a partnership with the Data Science MS program:

i. Star2star
ii. Voalte
iii. Mobilebits
iv. HSN
v. NextEra
vi. Catalina Marketing
vii. Beals
viii. Roskamp
ix. Riskwatch

b) These U.S. businesses have expressed interest in a partnership with the Data Science MS program:
i. Akamai
ii. Ancestry.com
iii. Annalect
iv. Colchis Capital
v. Lovelace Respiratory Research Institute
vi. Mind Research Network
vii. Allen Brain Institute
viii. Protege Partner

7. ☒ Project Improves the Use, either Operationally or Academically, of Existing Space

Explanation:
At the moment, space is extremely tight in the existing Heiser Natural Sciences building, which works against the spontaneous, serendipitous interactions so valuable to science. The Heiser Addition will increase the utility of the existing building through space reassignments to the benefit of the various science disciplines. Interaction among faculty and students in these different disciplines will be enhanced, leading to better science.

8. ☐ Contribution of Local Funds Through Matching Grants, Property Donations, etc.

Explanation: N/A

9. ☐ Reduces Future Deferred Maintenance Cost and Extends the Life of the Facility by Bringing the Project up to Existing Standards (cost-benefit analysis of renovation or new facility vs. maintenance)

Explanation: N/A

Other Pertinent Information not included above:

This request will allow New College of Florida to break ground and complete this STEM expansion project.

Higher Educational Facilities
Return on Investment

Institution: University of North Florida
Project: Skinner Jones Hall Renovations (North and South) Renovation/Expansion
Total Project Cost: $ 30.0 M
Previous Funding (State): $ 18.75 M
Current Request: $ 11.25 M
STEM (Yes or No): YES
Contact Person (Name, Position, Office and Cell Phone No., Email):
Ms. Shari Shuman, Vice President for Administration & Finance
Office: (904) 620-4727; Cell: (904) 338-6075; Email: sshuman@unf.edu

Check any box(es) that apply and provide a quantitative explanation. Identify the term or years in which ROI information is projected.

1. ☒ Number of Additional Degrees and Certificates Produced and How Those Degrees are Meeting the Needs of our State (Job Openings, Average Wages of those Job Openings, etc)

   Explanation:

   a. Producing 380 STEM degrees per year
   b. Average starting salary for graduates:

Physics	$ 60,000
Chemistry	$ 44,700
Computing Sciences	$ 55,400
Engineering	$ 62,000

2. ☒ Number of Additional Students Served and the Benefits/Efficiencies Created (increase graduation rate, alleviate waitlist, increase academic support, etc)

   The additional academic space will allow for a 6% increase in enrollment per year in Civil, Mechanical and Electrical Engineering, and will accommodate the UNF Materials Science and Engineering Research Facility, a partnership with TESCAN USA to establish a training demonstration and development center for advanced electron microscopy. The result of this collaboration will establish an innovation laboratory that explores unique applications and establishes a highly effective outreach program to both industry and academia.
   Increasing academic support: The facility will accommodate academic advising and career services for the college, which will be co-located to better align academic progress to employment.

3. ☒ Amount of Additional Research Funding to be Obtained; Patents Awarded

Increase of $2 - $3 million per year in additional research funding to result from the activities in the facility.

4. ☒ Project is in an Area of Strategic Emphasis as Determined by the Board of Governors' Gap Analysis or the Department of Economic Opportunity's National Occupational Forecast

5. ☒ Improves the Ranking of a Preeminent Program or Improves on a Performance Funding Model Metric
   Increased STEMM Degree Production, which in turn increases employability and salaries of graduates.

6. ☒ Increase Business Partnerships Which Will Lead to Guaranteed Internships and Jobs for Students
   Partnership with TESCAN USA to house a training demonstration and development center for advanced electron microscopy. Industry partnerships include: Boeing, Vistakon, Crowley, US Army Corps of Engineers, Mayo Clinic, Embraer, Haskell, Stellar, Saft American, Inc., and Goodrich, among many other environmental and engineering firms.

7. ☒ Project Improves the Use, either Operationally or Academically, of Existing Space
   Explanation:
   a. Renovations and the addition will provide for 66,000-100,000 NASF

8. ☒ Contribution of Local Funds Through Matching Grants, Property Donations, etc.
   Explanation:
   a. Leverage possibilities for NSF, NIH and ACS grants

9. ☒ Reduces Future Deferred Maintenance Cost and Extends the Life of the Facility by Bringing the Project up to Existing Standards (cost-benefit analysis of renovation or new facility vs. maintenance)

This project is a substantial renovation of an original 1970's building in need of modernization. This project extends the life of current facilities and through updating, will result in efficiencies in per square foot operating and maintenance costs due to LEED-standard construction. A cost-benefit analysis was performed which supported the decision to renovate rather than build a new building. Not only less expensive, but the renovation would result in increased square footage. Deferred Maintenance Costs are $6.2 million in projects identified consisting of HVAC, electrical, plumbing, building envelope, fire / life-safety, and interiors.

Other Pertinent Information not included above:

Private Investment
Within the Memorandum of Understanding currently being negotiated between TESCAN USA and the University of North Florida, in the first 4 years, TESCAN USA would provide:

1. Scholarships ($15,000/year for 4 years):	$ 60,000.00
2. Warranties (parts & labor service contract):	$ 480,000.00
3. Outreach events:	$ 60,000.00
4. TESCAN USA fulltime personnel:	$ 80,000.00
5. School Demonstrations (see below):	$ 850,000.00
6. Technical personnel training:	$ 90,000
	$1,620,000

TESCAN USA would dedicate two of their roving instruments to the five county area (First Coast) predominantly for public school demonstrations, but a minor fraction for industry as well. This enhances outreach, builds the STEM pipeline, and increases workforce development in this important technical area with high-paying jobs.

Outreach: This doesn't include any of the instruments at UNF, nor does it detract/compete with benefits in the MOU. Over the initial four-year term, and between instrument use time and support, we estimate an $850,000 benefit to the state.

Quantifiable Secondary Benefits in first 4-years
It is anticipated that the TESCAN Center and Associated Advanced Manufacturing and Materials Innovation Programs will produce approximately 100 additional Bachelor of Science graduates in Materials Engineering and 20 additional masters degree graduates over the first five years.

In addition, we anticipate partnering with Florida State College at Jacksonville (FSCJ) to develop a two-year or less SEM Technician training program (which TESCAN USA is contributing to) that would produce about 50 graduates. The Jax Chamber has identified these types of engineers as in short-supply in the Northeast Florida Area, and estimates the shortage in these areas will increase over the next few years, and may result in an inability to attract companies if this workforce gap is not met. These positions form the basis of aeronautical, automotive and advanced manufacturing companies. According to information from the Florida Department of Economic Opportunity, Starting Materials Engineers (BS level) earn an average of $60,650, and experienced engineers (MS level) earn an average of $103,764. In addition, according to Simply Hired, Inc., Microscopy Technicians earn an average of $43,000/year.

The total estimated additional benefit to the State from a wage perspective would be:

50 technicians averaging $43,000/year:	$ 2.15 million/year
100 Entry Engineers averaging $60,650/year:	$ 6.07 million/year
20 advanced engineers averaging 103,764/year:	$ 2.08 million/year
	$10.3 million/year

Higher Educational Facilities
Return on Investment

This is a tool developed by a collaborative group of stakeholders designed to facilitate the identification of return on investment metrics for higher education facilities. Check any box(es) that apply, provide a quantitative explanation, and identify the term or years in which ROI information is provided.

Institution: University of Central Florida
Project: Partnership IV
Total Project Cost: $ 61.0 M
Previous Funding (State): $ 28.0 M
Current Request: $ 26.9 M
STEM (Yes or No): YES
Contact Person (Name, Position, Office and Cell Phone No., Email):
Dr. Daniel Holsenbeck, Senior Vice President of University Relations
Office: (407) 823-2387; Cell: (407) 247-9421; daniel.holsenbeck@ucf.edu

Check any box(es) that apply and provide a quantitative explanation. Identify the term or years in which ROI information is projected.

1. ☒ Number of Additional Degrees and Certificates Produced and How Those Degrees are Meeting the Needs of our State (Job Openings, Average Wages of those Job Openings, etc.)
   Explanation:
   a. The Modeling and Simulation MS and PhD programs benefit from partnerships with the military commands and other federal government organizations that share the UCF Partnership buildings located in Central Florida Research Park. There were 44 graduates in 2012-13. Florida Education and Training Placement Information Program (FETPIP) data indicates 20 employed in Florida, with an average annual wage of $89,168. Twenty-two of the 2012-13 graduates are pursuing further education.
   b. Partnership IV has direct employment implications for more than 27,000 Floridians in the Modeling, Simulation & Training (MS&T) sector, with an approximate average salary of $69,797.

2. ☒ Number of Additional Students Served and the Benefits/Efficiencies Created (increase graduation rate, alleviate waitlist, increase academic support, etc.)
   Explanation:
   a. Partnership IV will support the MS&T cluster, which, on average, contributes nearly $4.8B annually to Florida's Gross State Product.
   b. Enhancing Central Florida Research Park with Partnership IV potentially avoids loss to the region and to the state of strategic national programs

and dollars that could result from Department of Defense (DoD) budget cuts, sequestration, and any future rounds of Base Realignment & Closure (BRAC).

3. ☐ Amount of Additional Research Funding to be Obtained; Patents Awarded
   Explanation: N/A

4. ☒ Project is in an Area of Strategic Emphasis as Determined by the Board of Governors' Gap Analysis or the Department of Economic Opportunity's National Occupational Forecast
   Explanation:
   The Modeling and Simulation MS and PhD programs are designated as STEM programs. A large footprint of industry companies in Florida recruit heavily from these advanced degree programs to fill their high-tech workforce needs.

5. ☒ Improves the Ranking of a Preeminent Program or Improves on a Performance Funding Model Metric
   Explanation:
   Graduates of the Modeling and Simulation MS and PhD programs contribute to Metric 8A of the Performance Funding Model (graduate degrees awarded in areas of strategic emphasis (includes STEM)).

6. ☒ Increase Business Partnerships Which Will Lead to Guaranteed Internships and Jobs for Students
   Explanation:
   a. Partnership IV enhances UCF/DoD partnerships in MS&T and lessens the likelihood of BRAC actions, which would have an alarming negative effect on the current $4.8B annual economic benefit to Florida. Education in MS&T also develops a workforce to meet future academic, military, and industrial requirements.
   b. More than 1,000 companies and organizations are involved in the MS&T industry in Florida, creating more than 60,700 jobs (direct, indirect and induced) across the state.

7. ☒Project Improves the Use, either Operationally or Academically, of Existing Space
   Explanation:
   Partnership IV creates classified lab space for both the Military and UCF. This space will not only satisfy a long-standing unfunded requirement for the University and military commands, but will support advanced research and development (R&D) and the R&D work to meet emerging missions (e.g., cyber defense training, etc.). In the long run, this will set

the conditions for additional budget authority for our military commands, which, in turn, could translate into more jobs in the Central Florida Research Park.

8. ☒ Contribution of Local Funds Through Matching Grants, Property Donations, etc.

   Explanation:
   Partnership IV avoids loss to the region and to the state of strategic national programs and dollars that could result from DoD budget cuts, sequestration, and any future rounds of BRAC.

9. ☐ Reduces Future Deferred Maintenance Cost and Extends the Life of the Facility by Bringing the Project up to Existing Standards (cost-benefit analysis of renovation or new facility vs. maintenance)

   Explanation: N/A

Other Pertinent Information not included above:

- Partnership IV supports UCF's state charter as the Center of Excellence in Simulation and Training.

- The Central Florida region's Modeling, Simulation and Training (MS&T), including UCF's contributions, result in the following economic impact:
  - On average, more than $4.8B annually to Florida's Gross State Product
  - Nearly $8.0B in state sales (economic output) activity
  - 1,000+ Florida companies and organizations involved in MS&T
  - Direct employment of more than 27,000 Floridians in the sector, with an approximate average annual salary of $69,797

- Specifically in the Central Florida Research Park, the economic impact is as follows:
  - Average salaries reported at more than $82,000
  - Federal government employment of 2,800 military and civilian personnel involved in advanced R&D
  - Heavy military reliance on MS&T training devices and other technologies provided by UCF to meet their training and future high-tech workforce requirements, as well as cooperative R&D programs to advance the state-of-the-art in MS&T

- Partnership IV's short-term impact to the local economy is:
  - Year 1: $83,861,787 355 construction jobs, 276 other sectors
  - Year 2: $10,938,494 46 construction jobs, 36 other sectors

Higher Educational Facilities
Return on Investment

This is a tool developed by a collaborative group of stakeholders designed to facilitate the identification of return on investment metrics for higher education facilities. Check any box(es) that apply, provide a quantitative explanation, and identify the term or years in which ROI information is provided.

Institution: Florida State University
Project: Earth Ocean Atmospheric Sciences Building Replacement/Expansion
Total Project Cost: $ 69.85 M
Previous Funding (State): $ 28.85 M
Current Request: $ 41.00 M
STEM (Yes or No): YES
Contact Person (Name, Position, Office and Cell Phone No., Email):
Kathleen Daly, Associate Vice President, 850-644-4453, 850-591-3920, kdaly@fsu.edu

Check any box(es) that apply and provide a quantitative explanation. Identify the term or years in which ROI information is projected.

1. ☒ Number of Additional Degrees and Certificates Produced and How Those Degrees are Meeting the Needs of our State (Job Openings, Average Wages of those Job Openings, etc)
   Explanation:
   a. The current annual average of degrees awarded by the programs, taken over the past five years, is 106 degrees per year.
   b. After the new building is in place we project an increase of this degree rate over the subsequent five-year timeframe, resulting in an annual degree output of 156 degrees per year.
   c. All of these degrees are and will be in STEM fields.

2. ☐ Number of Additional Students Served and the Benefits/Efficiencies Created (increase graduation rate, alleviate waitlist, increase academic support, etc)
   Explanation: N/A

3. ☒ Amount of Additional Research Funding to be Obtained; Patents Awarded
   Explanation:
   a. FY 2014 research funding exceeded $11 million.
   b. After the new building is in place, the projection is an increase to at least $15 million per year, with potential to go higher.

4. ☒ Project is in an Area of Strategic Emphasis as Determined by the Board of Governors' Gap Analysis or the Department of Economic Opportunity's National Occupational Forecast

   Explanation:

   a. Degrees awarded by this program include Environmental Science (CIP 03.0104), Biological, Chemical and Physical Oceanography (CIP 40.0607), Geology (CIP 40.0601), Geophysical Fluid Dynamics (CIP 40.9999), and Meteorology (CIP 40.0401). All of these degree programs qualify for the category identified by the BOG titled Programs of Strategic Emphasis.

5. ☒ Improves the Ranking of a Preeminent Program or Improves on a Performance Funding Model Metric

   Explanation:

   a. This new facility will help FSU compete for high performing, nationally competitive faculty that will increase opportunities for new grants raising the University's reputation and productivity. One measure used to measure universities is research productivity. Between 2008 and 2013, the EOAS faculty generated $64 M in external research funds to support university research activities, primarily through federal grants. With the addition of space for additional faculty, more efficient labs and space to collaborate, research productivity should increase.

6. ☐ Increase Business Partnerships Which Will Lead to Guaranteed Internships and Jobs for Students

   Explanation: N/A

7. ☒ Project Improves the Use, either Operationally or Academically, of Existing Space

   Explanation:

   a. Currently EOAS operates in 7 separate buildings, two of which are off the Main Campus; creation of the new facility will allow other existing disciplines to move into some of the previously occupied space by EOAS.
   b. The new facility will enhance multidisciplinary research involving MagLab personnel and the Center for Ocean-Atmospheric Prediction Studies (COAPS) by providing a seamless co-location of laboratory activities.

8. ☐ Contribution of Local Funds Through Matching Grants, Property Donations, etc.

   Explanation: N/A

9. ☒ Reduces Future Deferred Maintenance Cost and Extends the Life of the Facility by Bringing the Project up to Existing Standards (cost-benefit analysis of renovation or new facility vs. maintenance)

    Explanation:

    a. Deferred maintenance needs will be eliminated by the demolition of two 1950's buildings, and will allow room for construction of EOAS.

Other Pertinent Information not included above:

This project has received previous funding, and this will complete the request for construction funding.

Higher Educational Facilities
Return on Investment

This is a tool developed by a collaborative group of stakeholders designed to facilitate the identification of return on investment metrics for higher education facilities. Check any box(es) that apply, provide a quantitative explanation, and identify the term or years in which ROI information is provided.

Institution: University of South Florida – USF Health
Project: 5. USF Health Morsani College of Medicine Facility
Total Project Cost: $ 62,000,000
Previous Funding (State): $ 22,000,000
Current Request: $ 20,000,000
STEM (Yes or No): Yes

Contact Person (Name, Position, Office and Cell Phone No., Email):
Charles J. Lockwood, MD
Senior Vice President, USF Health
Dean, USF Morsani College of Medicine
(813) 974-0533 office
cjlockwood@health.usf.edu

Check any box(es) that apply and provide a quantitative explanation. Identify the term or years in which ROI information is projected.

1. ☒ **Number of Additional Degrees and Certificates Produced and How Those Degrees are Meeting the Needs of our State (Job Openings, Average Wages of those Job Openings, etc)**

   Explanation:

   Relocating the Morsani College of Medicine (MCOM) and the Heart Institute to a downtown Tampa location will afford the MCOM the opportunity to offer a Physician's Assistant Program which will produce an estimated 50 new graduate degrees each year a program capacity. The relocation will also free up roughly 81,000 gross square feet of space on the USF Tampa Campus and will create a number of opportunities for the expansion of some academic programs in the College of Nursing and allow for the establishment of a new occupational therapy doctorate program which will produce 30 new graduate degrees per year at program capacity.

In addition, the relocation will ease the growth pressure of an expanding PharmD program within the USF College of Pharmacy (COP). This program is currently housed within MCOM lab space and will produce 100 graduate degrees per year once program capacity is achieved in AY 2016-17.

2. ☒ **Number of Additional Students Served and the Benefits/Efficiencies Created (increase graduation rate, alleviate waitlist, increase academic support, etc)**

Explanation:

The relocation of the MCOM to a downtown Tampa location will allow for the expansion of the academic programs at USF Health. USF Health served approximately 6,800 students in academic year 2013-14. With a new facility, the academic needs of an additional 2,500 students could be met by academic year 2018-19.

- Nursing – Current enrollment exceeds 2,000 students and will not be able to accommodate further growth without additional space.
- PharmD program will reach program capacity of 400 students by academic year 2016-17.
- Occupational Therapy is currently in the planning stages and will have a total of 90 new students at program capacity.
- Athletic Training will generate and addition 15.0 new FTE with the conversion of their program to the graduate level.
- Physician Assistant program – 100 new students (pending ARC-PA approval)
- Nursing had 431 qualified applicants to the pre-licensure nursing program; 77% qualified applicants were denied entrance (fall 2014).
- DPT has experienced exponential growth in applicant pool since implementation of degree in 2006.
- Pharmacy currently has an 8:1 application ratio.

3. ☐ **Amount of Additional Research Funding to be Obtained; Patents Awarded**

Explanation:

4. ☒ **Project is in an Area of Strategic Emphasis as Determined by the Board of Governors' Gap Analysis or the Department of Economic Opportunity's National Occupational Forecast**

Explanation:

This project would house and free up space **for academic programs that are** currently identified as Programs of Strategic Emphasis and fall into the category of Critical Workforce Needs in the Healthcare field.

Academic programs that would be specifically impacted include:

- Medicine
- Athletic Training
- Physician Assistant
- Pharmacy
- Occupational Therapy
- Physical Therapy
- Registered Nursing
- Nurse Anesthetist
- Nursing Practice

5. ☒ **Improves the Ranking of a Preeminent Program or Improves on a Performance Funding Model Metric**

Explanation:

The USF Morsani College of Medicine is currently ranked 78th among the Top 100 medical schools in the nation by U.S. News & World Report. We expect to improve this ranking and be a top 50 medical school with a new facility.

6. ☐ **Increase Business Partnerships Which Will Lead to Guaranteed Internships and Jobs for Students**

Explanation:

7. ☒ **Project Improves the Use, either Operationally or Academically, of Existing Space**

Explanation:

Project allows us to move existing medical education program downtown in the proposed new facility. Thus, creating opportunities to repurpose, rebuild, and improve approximately 80,000 SF of existing facility space. These spaces will be used for the current expansion and growth of other Health Care academic

programs, along with also housing administrative support programs necessary for sustaining high quality academic standards in these academic programs.

8. ☒ **Contribution of Local Funds Through Matching Grants, Property Donations, etc.**

   Explanation:

   - A gift of $18M was made by Carol and Frank Morsani to the project with additional gifts projected if the state support continues.

   - Through the generosity of Mr. Jeff Vinik, the USF Board of Trustees will be granted a fee simple ownership of an unimproved parcel of land in downtown Tampa for the Morsani College of Medicine facility. This gift is estimated at $10M.

   - The City of Tampa and Hillsborough County are slated to invest $30M in street and infrastructure improvements in the vicinity surrounding the donated property from Mr. Vinik.

   - Strategic Property Partners will construct a medical office building and parking garage on the donated property adjacent to the Morsani College of Medicine facility with an estimated value of $90M.

9. ☒ **Reduces Future Deferred Maintenance Cost and Extends the Life of the Facility by Bringing the Project up to Existing Standards (cost-benefit analysis of renovation or new facility vs. maintenance)**

   Explanation:

   Deferred maintenance will be reduced for the existing 8**1**,000SF of reusable space. However, a reasonable capital investment is necessary for repurposing and building th**is** space.

Other Pertinent Information not included above:

Higher Educational Facilities
Return on Investment
August 1, 2015

This is a tool developed by a collaborative group of stakeholders designed to facilitate the identification of return on investment metrics for higher education facilities. Check any box(es) that apply, provide a quantitative explanation, and identify the term or years in which ROI information is provided.

Institution: University of Florida
Project: Engineering Innovation Nexus Renovation/Addition
Total Project Cost: $ 53.0 M($45M PECO approved by BOG, $4M University commitment, $4M additional PECO request to be submitted to BOG for approval)
Previous Funding (State): 0
Current Request: $ 25.0 M
STEM (Yes or No): YES
Contact Person
Curtis Reynolds, VP for Business Affairs; Office Phone: 352-392-1336
Email: curtrey@ufl.edu
Cammy Abernathy, Dean of Engineering; Office Phone: 352-392-6000
E-mail: caber@eng.ufl.edu
Linda Collins, UF Government Relations; Phone: 850-933-6385; Email: collinslbem@comcast.net

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Check any box(es) that apply and provide a quantitative explanation. Identify the term or years in which ROI information is projected.

1. ☒ Number of Additional Degrees and Certificates Produced and How Those Degrees are Meeting the Needs of our State (Job Openings, Average Wages of those Job Openings, etc)
   Explanation:
   a. 5-year projected increase in engineering degrees: 300
   b. Range of wages for student graduates in engineering fields (BS: $55K-$70K; PhD: $70K-$120K)
   c. Projected job openings: state (18,000) and nation (300,000)
   d. Proposed transformation of the engineering educational process at the University of Florida will result in graduates entering the workforce with enhanced leadership and entrepreneurship skills.

2. ☒ Number of Additional Students Served and the Benefits/Efficiencies Created (increase graduation rate, alleviate waitlist, increase academic support, etc).
   Explanation:

a. As an integral part of UF's plan for Preeminence, there is a need to re-purpose the 50-year old Nuclear Sciences Building to establish a 21st Century infrastructure to support increased numbers of students earning engineering degrees and to provide for cutting-edge research.
b. Currently, UF and the nation experience a 45% attrition rate of students leaving engineering programs by their junior year. The new 21st Century facility will support changes in the way students are educated by providing hands-on learning experiences early on in their curriculum, thus improving sustained interest, creativity, retention, and recruitment efforts. The Integrated Classroom design includes movable walls and furniture to facilitate different instructional modalities. Collision spaces will compel collaboration.
c. Transforming Engineering Education would involve a Global Innovation Network of alumni, experts, and student/faculty teams in pursuing real-world team approaches to innovation.
d. Currently, 1700 number of undergraduate and graduate students are accommodated in the Nuclear Sciences Building. The newly renovated/expanded Innovation Nexus Building will accommodate a projected additional 1800 students and 25 faculty. Additionally, the prototyping laboratory will be made available to all 8000 engineering students.

3. ☒ Amount of Additional Research Funding to be Obtained; Patents Awarded
Explanation:
a. Currently, the College of Engineering engages in more than $65M research annually. The newly renovated/expanded facility will support a projected increase of $4M in industry research funding and $10M in multidisciplinary research funding. Tech transfer will be increased and annual production of Start-up companies will be doubled from 5 to 10.
b. COE Preeminence efforts include: Neuroengineering, Cybersecurity, Data Analytics, Autonomous Systems, Renewable Energy, Online Learning Institute, Human Centered Computing, Computer Graphics/Biodiversity, Advanced Manufacturing all of which address statewide and national needs. Emphasis on these areas will result in increased research funding, and additional invention disclosures, executed license and option agreements, and patents. (See 5 b.)

4. ☒ Project is in an Area of Strategic Emphasis as Determined by the Board of Governors' Gap Analysis or the Department of Economic Opportunity's National Occupational Forecast
Explanation: Yes. The need for additional graduates with Engineering degrees, especially in the areas of advanced manufacturing, biotechnology and computer engineering has been recognized by the Access and Attainment Commission and the Department of Economic Opportunity. Additionally, the Department of Economic Opportunity has projected that engineering job openings are included in the top 15 largest-growing occupational groups in the future. As one of the State's premier

universities, UF is perfectly positioned to address the State's workforce and economic development goals in this area.

5. ☒ Improves the Ranking of a Preeminent Program or Improves on a Performance Funding Model Metric

a. Explanation: The proposed Innovation Nexus Building will facilitate, support an increase the university's performance on all of the preeminent university metrics specified in s.1001.7065, F.S. related to freshmen qualifications and retention and graduation rates; national academy memberships for faculty; annual research expenditures; numbers of patents awarded; national rankings for programs; annual award of doctoral degrees; number of postdoctoral appointees; and endowment funding. In addition UF continues to emphasize the Board of Governors Performance Funding Model metrics addressing student retention/graduation/employment rates and average earnings, continued emphasis on increasing the number of undergraduate and graduate STEMM degrees, increased research funding and faculty awards.

b. College of Engineering R&D Statistics for the past 5 years: 536 invention disclosures submitted; 896 US & Foreign Patent applications submitted/254 Patents issued; 185 executed license & option agreements; 30 start-up companies (5-6 by students), 2x national average per research dollar in patents issued, 4x national average per research dollar in # of start-up companies.

6. ☒ Increase Business Partnerships Which Will Lead to Guaranteed Internships and Jobs for Students.

    a. The building will be 21st century home of the Engineering Industrial Experiment Station (EIES). EIES will help to support and recruit high-tech companies to Florida in order to increase the state's economic competitiveness and to support collaboration on research and development with industry across the state and nationwide.
    b. The College of Engineering actively pursues opportunities for students to engage in internship programs by departmental events which host industrial representatives for seminars and meetings with students and through other networking events held in concert with the UF Career Resource Center.
    c. Engineering Start-up companies, annually, are projected to be doubled from 5 to 10 - a percentage of which will be started by students.

7. ☒ Project Improves the Use, either Operationally or Academically, of Existing Space Explanation:

    a. The renovation and addition will allow for re-purposing the 50-year old Nuclear Sciences building, to provide approximately 74,000 square feet for a new, 21st Century, state-of-the art educational environment to bring together interdisciplinary faculty, undergraduate and graduate students in collision

spaces that compel collaboration. The Integrated Classroom design includes movable walls and furniture to facilitate different instructional modalities.

b. Location is a key feature. Located in the center of campus, facing the Reitz Union with pedestrian walkways and intersections, this building provides a centerpiece for the face of innovation on UF's campus.
c. Two floors of the existing building are underground. Funding will be used to retro-commission the existing building in order to identify key infrastructure upgrades which the project will improve and to create a deferred maintenance priority list so the University can plan accordingly

8. ☒ Contribution of Local Funds Through Matching Grants, Property Donations, .
Explanation: UF is committing $4M of non-PECO funding to this project.

9. ☒ Reduces Future Deferred Maintenance Cost and Extends the Life of the Facility by Bringing the Project up to Existing Standards (cost-benefit analysis of renovation or new facility vs. maintenance)
Explanation:
   a. The renovated part of the 50-year old facility will include installation of new utility infrastructure, providing for energy efficient equipment. This will also reduce the load on the existing building infrastructure, which in conjunction with the retro-conditioning, will reduce annual operating costs.
   b. The new facility will meet V4 LEED standards.

Other Pertinent Information not included above:

UF Goal: ***The State's workforce and economic development needs are addressed in the strategic plans of the University of Florida and the Board of Governors, including goals to: 1) increase engineering baccalaureate and graduate degrees awarded annually; 2) increase STEMM research; 3) increase spin-off companies due to research and development. These goals are recognized in the Preeminence legislation articulated in s. 1001.7065, F.S. as well as the Board of Governors Performance Funding Model. The proposed Engineering Innovation Nexus Building will catapult UF's efforts in these areas.***

The proposed facility will house the Biotech Lab to capitalize on UF's strengths in health care and engineering, the Engineering Innovation Institute and Engineering Leadership Institute to support innovative thought and leadership, Engineering Industrial Experiment Station to expand collaborative efforts with industry in the state, capstone design labs to facilitate interdisciplinary collaboration, the Global Innovation Network to enhance real-world team approaches to innovation, and innovative labs and teaching environments to foster emphasis on human centered design, which focuses on optimizing technology around how users can, want or need to use technological products rather than forcing users to change their behavior to accommodate the technology.

Higher Educational Facilities
Return on Investment

This is a tool developed by a collaborative group of stakeholders designed to facilitate the identification of return on investment metrics for higher education facilities. Check any box(es) that apply, provide a quantitative explanation, and identify the term or years in which ROI information is provided.

Institution: Florida International University
Project: Satellite Chiller Plant Expansion
Total Project Cost: $ 16.425 M
Previous Funding (State): $ 9.362 M
Current Request: $ 7.062 M
STEM (Yes or No): YES
Contact Person (Name, Position, Office and Cell Phone No., Email): John M. Cal, AVP, Facilities Management, O: 305-348-4001, C: 305-323-1488, e-mail: John.Cal@fiu.edu

Check any box(es) that apply and provide a quantitative explanation. Identify the term or years in which ROI information is projected.

1. ☐ Number of Additional Degrees and Certificates Produced and How Those Degrees are Meeting the Needs of our State (Job Openings, Average Wages of those Job Openings, etc)
   Explanation: N/A

2. ☐ Number of Additional Students Served and the Benefits/Efficiencies Created (increase graduation rate, alleviate waitlist, increase academic support, etc)
   Explanation: N/A

3. ☐ Amount of Additional Research Funding to be Obtained; Patents Awarded
   Explanation: N/A

4. ☐ Project is in an Area of Strategic Emphasis as Determined by the Board of Governors' Gap Analysis or the Department of Economic Opportunity's National Occupational Forecast
   Explanation: N/A

5. ☐ Improves the Ranking of a Preeminent Program or Improves on a Performance Funding Model Metric
   Explanation: N/A

6. ☐ Increase Business Partnerships Which Will Lead to Guaranteed Internships and Jobs for Students

Explanation: N/A

7. ☒ Project Improves the Use, either Operationally or Academically, of Existing Space
   Explanation:
   a. Provides a capability that does not exist today: 365x24x7 back-up electrical power (via two generators) that can sustain chilled water/air conditioning to critical research facilities in the event of an FP&L power shutdown (such as during a hurricane or during a load control shut-down). Without this back-up capability, critical research remains at risk due to the loss of local utility power.
   b. Three additional chillers and cooling towers also enable the University to produce chilled water more efficiently.
   c. This facility and the additional equipment provide the chilled water/air conditioning for 3 million square feet of space added to the campus since 2007, including research and lab facilities. This satellite chiller plant was specifically designed to support STEM research and instructional facilities at the undergraduate, graduate and research levels in the Academic Health Center (AHC) quadrant of the Modesto Maidique Campus (MMC).
   d. Provides guaranteed ability to maintain minimum required cooling level needed to operate the 7th largest public university campus in the US.

8. ☐ Contribution of Local Funds Through Matching Grants, Property Donations, etc.
   Explanation: N/A

9. ☐ Reduces Future Deferred Maintenance Cost and Extends the Life of the Facility by Bringing the Project up to Existing Standards (cost-benefit analysis of renovation or new facility vs. maintenance)
   Explanation: N/A

Other Pertinent Information not included above:

High cooling need buildings have been added to the main campus (MMC) from 2009-10 including the College of Nursing (AHC 3), the Science Classroom Building (AHC 4), and the Stempel College of Public Health and Social Work (AHC 5), all focusing on STEM instruction and research labs.

This project is completed; this is an equipment request only. The facility has already been designed to receive this equipment