2018-2019 Florida Job Growth Grant Fund
Workforce Training Grant Proposal

Proposal Instructions: The Florida Job Growth Grant Fund Proposal (this document) must be completed and signed by an authorized representative of the entity applying for the grant. Please read the proposal carefully as some questions may require a separate narrative to be completed. If additional space is needed, attach a word document with your entire answer.

Entity Information

Name of Entity: Miami Dade College
Federal Employer Identification Number (if applicable): ▮▮▮▮▮▮

Primary Contact Name: Lenore Rodicio, Ph.D.
    Title: Executive Vice President & Provost
    Mailing Address: 300 NE 2nd Avenue
                Miami, FL 33132
    Phone Number: 305-237-3803
    Email: lrodicio@mdc.edu

Secondary Contact Name: John Wensveen, Ph.D.
    Title: Vice Provost of Academic Schools
    Phone Number: 305-237-7296

Workforce Training Grant Eligibility

Pursuant to 228.101, F.S., the Florida Job Growth Grant Fund was created to promote economic opportunity by improving public infrastructure and enhancing workforce training. This includes workforce training grants to support programs offered at state colleges and state technical centers.

Eligible entities must submit proposals that:
- Support programs and associated equipment at state colleges and state technical centers.
- Provide participants with transferable and sustainable workforce skills applicable to more than a single employer.
- Are offered to the public.
- Are based on criteria established by the state colleges and state technical centers.
- Prohibit the exclusion of applicants who are unemployed or underemployed.

1. Program Requirements:

(If additional space is needed, attach a word document with your entire answer.)

Each proposal must include the following information describing how the program satisfies the eligibility requirements listed on page 1.

A. Provide the title and a detailed description of the proposed workforce training.

Miami Dade College Workforce Acceleration Via Exploration & Simulation (MDC WAVES)
Please see attached Miami Dade College WAVES proposal document.

B. Describe how this proposal supports programs at state colleges or state technical centers.

Please see attached Miami Dade College WAVES proposal document.

C. Describe how this proposal provides participants transferable, sustainable workforce skills applicable to more than a single employer.

Please see attached Miami Dade College WAVES proposal document. Also, employer partnership letters are attached from a sample of employers that will participate in the project.

D. Describe how this proposal supports a program(s) that is offered to the public?

Please see attached Miami Dade College WAVES proposal document.

E. Describe how this proposal is based on criteria established by the state colleges and state technical centers.

Please see attached Miami Dade College WAVES proposal document.

F. Does this proposal support a program(s) that will not exclude unemployed or underemployed individuals?

◉ Yes   ◯ No

Please see attached Miami Dade College WAVES proposal document.

G. Describe how this proposal will promote economic opportunity by enhancing workforce training. Please include the number of program completers anticipated to be created from the proposed training. Further, please include the economic impact on the community, region, or state and the associated metrics used to measure the success of the proposed training.

Please see attached Miami Dade College WAVES proposal document.

2. Additional Information:
(If additional space is needed, attach a word document with your entire answer.)

A. Is this an expansion of an existing training program? ☑ Yes ☐ No
    If yes, please provide an explanation for how the funds from this grant will be used to enhance the existing program.

Please see attached Miami Dade College WAVES proposal document.

B. Does the proposal align with Florida's Targeted Industries?
    (View Florida's Targeted Industries here.) ☑ Yes ☐ No

    If yes, please indicate the specific targeted industries with which the proposal aligns.
    If no, with which industries does the proposal align?

Infotech; Aviation See attached Miami Dade College WAVES proposal document. The proposal also includes Healthcare

C. Does the proposal align with an occupation(s) on the Statewide Demand Occupations List and/or the Regional Demand Occupations List? (View Florida's Demand Occupations List here.)
    ☑ Yes ☐ No

    If yes, please indicate the specific occupation(s) with which the proposal aligns.
    If no, with which occupation does the proposal align?

Please see attached Miami Dade College WAVES proposal document.

D. Indicate how the training will be delivered (e.g., classroom-based, computer-based, other).
   If in-person, identify the location(s) (e.g., city, campus, etc.)
   where the training will be available.
   If computer-based, identify the targeted location(s) (e.g. city, county, statewide
   where the training will be available.

   Please see attached Miami Dade College WAVES proposal document.

E. Indicate the number of anticipated annual enrolled students and completers in the proposed program.

   Please see attached Miami Dade College WAVES proposal document.

F. Indicate the length of program (e.g., quarters, semesters, weeks, etc.), including anticipated beginning and ending dates.

   Begin Date: 01/01/2019   End Date: 12/31/2021

G. Describe the plan to support the sustainability of the program after grant completion.

   Please see attached Miami Dade College WAVES proposal document.

H. Identify any certifications, degrees, etc. that will result from the completion of the program. Please include the Classification of Instructional Programs (CIP) code and the percent of completer in each code, corresponding with Section E.

   Please see attached Miami Dade College WAVES proposal document.

I. Does this project have a local match amount?

                                        ○ Yes   ◉ No

   If yes, please describe the entity providing the match and the amount (Do not include in-kind).

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J. Provide any additional information or attachments to be considered for the proposal.

Please see attached Miami Dade College WAVES proposal document.

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3. Program Budget
(If additional space is needed, attach a word document with your entire answer.)

Estimated Costs and Sources of Funding: Include all applicable workforce training costs and other funding sources available to support the proposal.

1.) **Total Amount Requested** $ 5,200,361
Florida Job Growth Grant Fund

2.) Other Workforce Training Project Funding Sources:
City/County $ 0
Private Sources $ 0

Other (grants, etc.) $ 0   Please Specify: N/A
Total Other Funding $ 0

3.) Workforce Training Project Costs:
Equipment $ 4,056,020
Personnel $ 351,910
Facilities $ 0
Tuition $ 0
Training Materials $ 0

Other $ 688,400   Please Specify: attached
Total Project Costs $ 5,200,361

Note: The total amount of the project should equal the total amount requested plus the total other funding.

4.) Provide a detailed budget narrative, including the timing and steps necessary to obtain the funding, how equipment purchases will be associated with the training program, if applicable, and any other pertinent budget-related information.

Please see attached Miami Dade College WAVES proposal document.

4. Approvals and Authority

(If additional space is needed, attach a word document with your entire answer.)

A. If entity is awarded grant funds based on this proposal, what approvals must be obtained before it can execute a grant agreement with the Florida Department of Economic Opportunity (e.g., approval of a board, commission or council)?

Please see attached Miami Dade College WAVES proposal document.

B. If approval of a board, commission, council or other group is needed prior to execution of an agreement between the entity and the Florida Department of Economic Opportunity:

    i.   Provide the schedule of upcoming meetings for the group for a period of at least six months.

    ii.   State whether entity is willing and able to hold special meetings, and if so, upon how many days' notice.

Please see attached Miami Dade College WAVES proposal document.

C. Attach evidence that the undersigned has all necessary authority to execute this proposal on behalf of the entity. This evidence may take a variety of forms, including but not limited to: a delegation of authority, citation to relevant laws or codes, policy documents, etc.
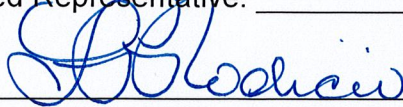
Please see attached delegation of signature authority document.

I, the undersigned, do hereby certify that I have express authority to sign this proposal on behalf of the above-described entity and to the best of my knowledge, that all data and information submitted in proposal is truthful and accurate and no material fact has been omitted.

Name of Entity: Miami Dade College

Name and Title of Authorized Representative: Lenore Rodicio, Exec. Vice President & Provost

Representative Signature: _____

Signature Date: 9/29/2018

Miami Dade College

Eduardo J. Padrón
College President
(305) 237-3316 / FAX: (305) 237-3109
email: eduardo.padron@mdc.edu

August 8, 2016

To whom it may concern:

I, Eduardo J. Padrón, President of Miami Dade College, hereby authorize Dr. Lenore Rodicio, Executive Vice President and Provost, to sign on my behalf as "College President" for the purpose of submitting grant proposals and conducting other grant-related business. In these grant-related matters, Dr. Rodicio shall serve as the Authorized Organizational Representative (AOR) for the College.

Sincerely,

Eduardo J. Padrón

Miami Dade College <u>W</u>orkforce <u>A</u>cceleration <u>V</u>ia <u>E</u>xploration & <u>S</u>imulation (WAVES) Florida Job Growth Grant Fund Workforce Grant Proposal

1. Program Requirements

A. Provide the title and a detailed description of the proposed workforce training program.

Miami Dade College (MDC) <u>W</u>orkforce <u>A</u>cceleration <u>V</u>ia <u>E</u>xploration & <u>S</u>imulation (WAVES) is a workforce acceleration initiative focused on preparing students for careers in targeted occupations with an emphasis on integration of robust, next generation career exploration and integration of simulation into existing programs of study.

<u>Targeted enrollment</u> - In addition to enrolling direct from high school students, *MDC WAVES* will target and enroll individuals who are: (1) low-income, (2) unemployed, (3) underemployed, (4) incumbent workers, (5) military veterans and their spouses, (6) displaced workers, (7) disadvantaged and underrepresented populations with barriers to employment and (8) those who program staff determine have a significant need for workforce training. It is expected that 2,064 participants will be served over the funded project period.

<u>Workforce acceleration</u> - *MDC WAVES* will target some of the fastest growing targeted industries in Florida and the South Florida region, including InfoTech and aviation, while strengthening the competencies of students pursuing healthcare related careers. An innovative component of the project will infuse a simulator technician program that addresses a targeted and growing need to have employees who are trained to repair the multitude of simulation devices and equipment being used in education and training programs and within employer sites. The design of this initiative ensures that there is an ocean of workers to meet the immense industry demand under designated targeted occupations, while simultaneously developing a bay of workers prepared to enter occupations that are so new that they don't even have Standard Occupation Classification (SOC) codes assigned, such as simulation technician.

- InfoTech – The Information Technology (IT) industry in the US is large and growing, with over 100,000 companies and revenues over $300 billion, according to First Research. Within Miami-Dade County, the IT industry is still emerging. The Miami-Fort Lauderdale metro area is home to over 8,000 tech firms, or about 30 percent of the state's total. The average wage in South Florida's tech industry was $83,720. The growth in tech jobs was above the state as a whole, at 4.8 percent versus 3.8 percent, from 2014 to 2015. Research done by Burning Glass Technologies shows that the demand for cybersecurity talent is far outstripping supply, with the highest demand in industries like Finance, Health Care, and Retail. The same research revealed that demand for cybersecurity professionals over the past five years grew 3.5 times faster than demand for other IT jobs and about 12 times faster than for all other jobs, according to the same report (2015).

MDC WAVES will focus on the high demand InfoTech occupations tied to cybersecurity and GIS. Students participating in the cybersecurity program will benefit from receiving training at MDC's newly opened, state-of-the-art, Cyber Range. The Cyber Range is a cutting-edge training platform to learn how to detect, stop, and remediate cyberattacks in real-time. The facility is designed to mimic what a S.O.C. (Security Operations Center) looks and feels like. This unique environment will permit trainees to experience learning and working in a true Security Operations Center similar to what they encounter in the industry. MDC's Cyber Range is one of the only such facilities of its type located in South Florida within a public institution of education.

Additionally, the rapid integration of simulation in academia and in workforce settings requires technicians who can program, understand and repair simulation equipment across sectors. Through its integration of simulation across programs, MDC will also be positioned to provide a simulation technician track within its School of Engineering, Design, and Technology (EnTec).

- Aviation - Aviation employment in Miami-Dade County is highly concentrated in passenger and freight air transportation. Additionally, Miami-Dade County has a large cluster in flight training, serving several aviation firms. MDC's School of Aviation will provide highly advanced, FAA approved simulation experiences primarily focused on pilot training.

  Flight simulation technology has evolved significantly in recent years with advances in computer speed. Simulators are used to train pilots and flight crew for both civilian and military aircraft.   Simulation technology can also be helpful for training engineering and maintenance crews. The need for trained pilots using simulation-based experiences for training, as well as the need for simulation technicians is reaffirmed. The School of Aviation will work collaboratively with MDC's EnTec to develop a focused simulation track within the A.S. program in Electrical Engineering (housed within EnTec). Students participating in the program will be able to gain real-world experience working on simulation equipment that reflects the latest model fixed wing and rotary wing aircraft.

- Healthcare - The US population age 65 and older has surpassed 40 million and is expected to grow over 50% between 2015 and 2030. These demographic trends will continue to drive rapid growth in healthcare, particularly in expanding sectors such as outpatient care, nursing/home care, and chronic disease treatment. The need in healthcare isn't limited to one particular discipline, such as nursing, medical assisting, or physical therapy, but is presenting across disciplines. Models of care and financing have shifted to an interdisciplinary approach to care. As demand for healthcare workers increases and more onsite care is needed, providers will have less capacity to support clinical site experiences for students. Simulation has the ability to decrease reliance on clinical sites, while supporting interdisciplinary education.

  MDC's Medical Campus is well positioned to integrate a full simulation experience into educational programs focused on high-demand, targeted healthcare occupations.

Miami Dade College Medical Campus is well-known for its Benjamin Leon School of Nursing, which typically enrolls more than 1,000 students in its nursing programs. Graduates from the program are employed throughout the county and the state. In fact, in most instances, if someone receives care from a nurse in Miami-Dade County, it is likely that the nurse graduated from MDC.

Exploration - The initiative will be further supported by MDC Works. Through MDC Works, participating students will gain early career exploration experiences; receive assistance in resume development and strengthening interview skills; participate in onsite and virtual job fairs; and be connected with apprenticeships, internships, and careers at established, new, and expanding employers. MDC Works will reach students through its physical location; presence of campus-based Career Workforce Readiness Advisors; and a host of virtual tools and resources. MDC will build on existing partnerships with CareerSource South Florida, the Miami-Dade Beacon Council, the Greater Miami-Dade Chamber of Commerce, community leaders, and local employers to successfully place participants. MDC will also work with these entities to attract businesses that may have refrained from calling Miami-Dade home due to shortage of workers with industry-required skills and competencies.

Included within the proposal request are three positions that will support initial startup and targeted student-employer engagement activities. The requested Instructional Technology Designer will be a first-year only position charged with developing user interface and presentation design for hands-on, technology-based career exploration, activity and event, and informational presentations to be housed within MDC Works – Wolfson Campus. Two full-time Career Workforce Readiness Advisors will work directly with students from InfoTech, Aviation and Healthcare pre-select students (students not yet formally admitted into, but expressing interest in, entering healthcare programs of study) to identify suitable pathways based on student interest and alignment of assessed skills and competencies with programs of study. Advisors will further assist students with developing resumes, strengthening interview skills, and performing employer-student matches through engagement with employers.

The goal - The goal of *MDC WAVES* is to accelerate and enhance education and training opportunities to produce a career-ready workforce that will have gained real world competencies via hands-on simulation experiences. The expected end result for participants is job placement with a high wage and a pathway for career progression. The outcome for Miami-Dade County and Florida is rapid deployment of career ready workers, possessing industry-valued technical and industry college credit certificates, as well as associate and baccalaureate degrees, that are able to occupy targeted occupations that contribute to the economic engine of Florida.

B. Describe how this proposal supports programs at state colleges or state technical centers.

MDC WAVES provides education and training to address thirteen (13) high-need occupations currently, and consistently, shown on the Regional Demand Occupations List via certificates, associate, baccalaureate degrees or a combination of these. Through *MDC WAVES*, MDC will

expand infrastructure to increase access to these pathways and provide equivalent quality of education in order to better serve the community.

Miami Dade College is the only state college located in Miami-Dade County – Florida's largest county with more than 2.6 million residents. For nearly sixty years, MDC has been providing programming targeting academic and vocational needs of area residents. The College has grown from its humble beginnings in 1969, with one campus serving just over 1,400 students, to one of the largest institutions of higher education in the United States, with eight campuses and numerous outreach centers reaching more than 160,000 students annually.

Through *MDC WAVES*, Miami Dade College continues to ensure that its students have the requisite skills and competencies to meet employer needs. This proposal supports the mission of the college to changes lives through accessible, high-quality teaching and learning experiences. The proposal targets high-demand occupations further reflecting MDC's responsibility to serve as an economic, cultural and civic leader for the advancement of a diverse global community.

C. Describe how this proposal provides participants transferable, sustainable workforce skills applicable to more than a single employer.

Miami Dade College has decades of experience in engaging workforce partners, industry associations, and economic development entities, as well as local workforce agencies in the development of programming. In fact, in the School of Nursing alone, partnership agreements are active with hundreds of employers and ninety-one clinical sites are currently being used.

MDC WAVES will provide transferrable, sustainable workforce skills that meet the needs of more than one single employer by:

- Continuing to engage employer partners throughout the design of the project. Currently, MDC has received commitment from multiple employer partners (See attached employer partnership letters) representing the InfoTech, healthcare, and aviation sectors. These employer partners have committed to activities such as:
    o assisting in curriculum development and/or curriculum review to ensure alignment with industry needs and necessary competencies;
    o contribution of resources, such as lectures on selected topics by subject matter experts to support the program, courseware resources, and supplemental skills assessments;
    o providing apprenticeship, pre-apprenticeship, and internship opportunities; and
    o committing to interviewing qualified program participants for appropriate positions, as available.
- Maintaining already active industry advisory councils to provide feedback on curriculum, expert insight on industry needs and trends, and linkages to employers and employer resources.

- Drawing upon MDC's active, high-level representation on the Beacon Council, a public-private partnership and the official economic development organization for Miami-Dade County, and the regional workforce investment board (CareerSource South Florida) to gain ongoing insight into new employers locating to the county, potential employers exploring establishing or relocating business to the area, and workforce gaps and needs.
- Capitalizing on and expanding resources to be offered through MDC Works, such as career exploration, employer job fairs, skills assessments, and employer/participant matching activities. The inclusion of MDC Works will further ensure significant, sustained reach to multiple employers across industry sectors.

The infusion of simulation across the project's design and participating program areas has been deliberate and targeted to meeting the needs of multiple employers across sectors. *MDC WAVES* targets three distinct industry sectors (infotech, healthcare, aviation), with a common component of integrating simulation into the learning experience. It has become widely known that the complexity and dynamicity of the current business environment increasingly requires employees to possess competencies that are not only specialized but also flexible enough to be adapted to fast-changing circumstances, across changing occupations, in a landscape where the lines between specific occupations and specific industry sectors are not as clear as they once were. Recent advances in technology have positioned simulations as a powerful tool for creating more realistic, experiential learning environments and can thereby help educational institutions and employers meet these emerging training challenges.

D. Describe how this proposal supports a program(s) that is offered to the public?

As a state-sponsored, open-access, public institution of higher education, all MDC programming is offered to the public. In addition to enrolling direct from high school students, *MDC WAVES* will target and enroll individuals who are: (1) low-income, (2) unemployed, (3) underemployed, (4) incumbent workers, (5) military veterans and their spouses, (6) displaced workers, (7) disadvantaged and underrepresented populations with barriers to employment and (8) those who program staff determine have a significant need for workforce training. It is the College's legislatively established responsibility to develop and provide educational and training programs that specifically serve the residents of Miami-Dade County, Florida.

MDC WAVES will provide industry-aligned, career-focused education/training opportunities that will be accessible to the public. The College's tuition has consistently been cited as one of the lowest in the country facilitating enrollment of segments of the population that otherwise might not have access to higher education.

E. Describe how this proposal is based on criteria established by the state colleges and state technical centers.

As with all academic programs introduced and implemented by Miami Dade College, programming included in *MDC WAVES* is aligned with the responsibilities of MDC, as a legislatively established state college and as outlined in Florida Statute 1004.65.

MDC WAVES relates to Florida Statute 1004.65 by:

1) Responding to community needs for postsecondary education and career degree education:
2) Serving all who can benefits without regard to age, race, gender, creed, or ethnic or economic background, while emphasizing the achievement of social and educational equity so that all can be prepared for full participation in society; and
3) Preparing students directly for careers requiring less than baccalaureate degrees. This may include preparing for job entry, supplementing of skills and knowledge, and responding to needs in new areas of technology.

MDC is also one of twenty-eight state colleges that make up the Florida College System (FCS). Meeting the above responsibilities also meets the mission of the Florida College System (FCS) *"to provide access to high-quality, affordable academic and career educational programs that maximize student learning and success, develop a globally competitive workforce and respond rapidly to diverse state and community needs."*

MDC WAVES will allow for the acquisition of state-of-the-industry technology and career exploration and connection services that position MDC graduates to be selected for positions in targeted and evolving occupations, with a focus on high demand occupations and targeted industries.

In identifying program areas and developing the design of the project, MDC:
- o Took into consideration Florida's identified target industries, The Beacon Council's identified target industry sectors for Miami-Dade County based on the One Community One Goal economic development assessment
- o Reviewed appropriate Florida Department of Education Curriculum Framework
- o Reviewed the Department of Labor Targeted Occupation List and Occupational Outlook projections, as well as EMSI data on job outlook, earnings, and other relevant data
- o Identified appropriate expenses that would allow for needed enhancements while simultaneously ensuring sustainability.

F. Does this proposal support a program(s) that will not exclude unemployed or underemployed individuals?   Yes or No

Yes, this proposal supports programs that will not exclude unemployed or underemployed individuals.

G. Describe how this proposal will promote economic opportunity by enhancing workforce training. Please include the number of jobs anticipated to be created from the proposed training. Further, please include the economic impact on the community, region, or state and the associated metrics used to measure the success of the proposed training.

Number of jobs anticipated to be created – A Washington Economics Group study commissioned by Miami-Dade County Public Schools in 2012, found that the number of permanent jobs arising from improved educational outcomes (increasing educational attainment to some college through certificates or attainment of an associates or bachelor's degree) results in the creation of 7,521 new jobs. Over 4,900 jobs are directly generated by the increased earnings attributable to improved education with an additional 2,589 jobs supported via indirect and induced effects. It is expected that the findings of the Washington Economics Group would be magnified related given the number of participants specific to this project coupled with Miami Dade College's standing of awarding more associates degrees than any other college in the country. The program enhancements are designed to significantly strengthen the employability and workforce readiness of participants, including promotion of upskilling.

It is estimated that *MDC WAVES* will result in 1,000 being workforce ready through participation in the enhanced training programs offered by the project over the two-year period. These students will fill at least 1,000 of the total annual openings estimated for these jobs. Using a multiplier effect based on 2.66 (indirect jobs) being created through the filling of 1,000 jobs, *MDC WAVES* **should be expected to result in the creation of 3,660 jobs (1,000 direct and 2,660 indirect).**

The project will also employ three full-time professional-level personnel (See budget narrative) which will further contribute to job growth directly indirect job creation of eight positions (using 2.66 multiplier). The program enhancements are also expected to increase enrollment in targeted programs of study which may result in hiring of additional faculty and support staff.

Multiple employer partners have also committed to interviewing and considering for hire completers of the project. Additionally, internship and apprenticeship placements will be strengthened through the inclusion of MDC Works. Internships and apprenticeships result in a stronger probability of job placement within the student's internship/apprenticeship site, which results in both direct and indirect jobs.

Promoting economic opportunity – According to an expansive study by Economic Modeling Specialists Intl. (EMSI) conducted in 2014, the estimated annual added income of MDC and its former students to the local economy is $3.3 billion. Additionally, the economic benefits of a college degree cascade from individuals to families and the community. Better employment translates to higher income and living standards. At MDC, where 67 percent of students are low-income and 46 percent live below the federal poverty line, the impact is even more dramatic. Having a college certificate or degree also coincides with improved health along with reductions in welfare, unemployment, and crime. According to the EMSI study, it has been

estimated that these savings to the public through an MDC education amount to some $35.4 million per year. In addition, taxpayers see a rate of return of 10 percent on their investment in MDC.

Utilizing Census Bureau data on average earnings by educational attainment for Miami-Dade County, the average monthly wage of workers in Miami-Dade County is $4,099. The average monthly wage for workers with a Bachelor's degree or above is $6,234. It is 1.5 times the $4,049 average monthly wage earned by workers with some college or Associate's degree and almost double the $4,240 monthly earnings of those with a high school diploma. These higher earnings support higher expenditures on many products in the local economy, benefiting all areas and sectors of the Miami-Dade economy.

Equally notable are the value-added impacts generated by improved educational outcomes, which can potentially create a net contribution to the Miami-Dade economy of close to $491 million per year. Increased educational outcomes create and sustain a high value-added, high-wage economy, with the greatest value-added impact generated in the Knowledge-Based Services sector, which includes InfoTech, healthcare, and aviation.

Overall, MDC generates significant returns on investment for students, taxpayers, and society:
- For every $1 that MDC students invest in their education, they gain $2.70 in lifetime earnings
- For every $1 that taxpayers invest in MDC, they gain $3.30 in added state revenue and social savings. Using this calculation, the investment in this project is expected to translate into $17,161,191 in added state revenue and social savings.
- For every $1 that society spends on MDC, it gains $12.10 in added taxes and public-sector savings related to reduced crime, lower unemployment, and increased health and well-being
- MDC contributes more than $3.4 billion to Miami-Dade County's economy annually, accounting for around 2.5% of its Gross Regional Product.

These impacts should be expected to increase as a result of the industry-generated, job-focused enhancements and services to be provide through *MDC WAVES*.

Metrics to measure success – *MDC WAVES* is predicated on increasing competencies of participants to ensure that they are career-ready, with skills that match employer needs. Program success will be measured through the following metrics:

Objective 1: Increase the number of academic courses within targeted programs integrating simulation-based experiences to promote real world scenarios in preparation for career-readiness.
- Total number of courses using simulation
- Number of unduplicated students receiving hands-on simulation-based experiences in targeted programs
- Total number of hours logged on simulation devices/equipment by program area

Objective 2: Promote employer partnerships and commitment to supporting targeted programs
- Number of employer partnerships maintained and new partnerships established
- Types of employer contributions (resources, internships, apprenticeships, curriculum review, etc.)
- Number of students receiving internships and/or apprenticeships

Objective 3: Improve economic stability of participants through employment
- Number/Percentage of students retained in targeted programs of study
- Employment rate of students (6-months post completion and upon job placement)
- Hourly wage comparison (pre-job placement and post job placement)
- Number/Percentage of students awarded certifications and/or degrees
- Satisfaction with education/training and career exploration services provided (students and employers)

2. Additional Information

A. Is this an expansion of an existing training program? <u>Yes</u> / No
If yes, please provide an explanation for how the funds from this grant will be used to enhance the existing program.

Yes. *MDC WAVES* will enhance the targeted existing training programs by integrating today's industry-recognized simulation technology into identified training programs. Simulations can be used to create a synthetic- or micro-world that immerses trainees in a realistic experience and exposes them to important contextual characteristics of the domain. Simulations can also be used as realistic practice environments for tasks that are too dangerous to be practiced in the real world or to provide opportunities for practice on tasks that occur infrequently.

Florida Job Growth funds will primarily be used to support the integration of simulation-based equipment and training into targeted programs. Funding will be used to purchase state-of-the-industry equipment and supplies so that participants are exposed to the same equipment they will be using in the field, reducing training time for the employer as well as improving participant job readiness.

B. Does the proposal align with Florida's Targeted Industries? <u>Yes</u> / No
If yes, please indicate the targeted industries with which the proposal aligns. If no, with which industries does the proposal align?

Yes. *MDC WAVES* is aligned with the qualified targeted industries of InfoTech and Aviation.

MDC WAVES further aligns with the healthcare industry sector. The inclusion of healthcare is in response to its identification by Miami-Dade County Beacon Council's, *One Community, One Goal* (OCOG) initiative, as a targeted industry. Healthcare was identified by OCOG based on analysis of a series of tools, including location quotient and shift-share analysis, and exploring

local potential for expansion in emerging sectors. This culminated in detailed profiles of recommended target industries and niche sub-sectors to address sustained growth industries specific to Miami-Dade County.

C. Does the proposal align with an occupation(s) on the Statewide Demand Occupations List and/or the Regional Demand Occupations List? <u>Yes</u> / No
If yes, please indicate the occupation(s) with which the proposal aligns. If no, with which occupation does the proposal align?

Yes. As reflected in *Table 1* below, *MDC WAVES* aligns with thirteen (13) occupations on the Regional Demand Occupations List, 2018-2019.

Table 1: Targeted Occupations Addressed by Proposal			Annual Openings	Annual % Growth	Hourly Wage*	
SOC Code	**Occupational Title**				**Mean**	**Entry**
InfoTech						
113021	Computer and Information Systems Mgrs.		148	2.08	$66.28	$43.60
151143	Computer Network Architects		136	1.49	$34.97	$23.07
151152	Computer Network Support Specialists		109	1.50	$28.40	$18.91
151121	Computer Systems Analysts		188	2.61	$41.74	$26.18
151151	Computer User Support Specialists		386	1.66	$23.91	$14.99
Healthcare						
292012	Medical and Clinical Laboratory Technicians		618	2.46	$18.70	$12.94
319092	Medical Assistants		8,271	3.06	$15.43	$12.27
312021	Physical Therapist Assistants		899	3.94	$31.15	$24.28
291126	Respiratory Therapists		88	1.10	$27.40	$21.68
291141	Registered Nurses		2,048	1.90	$33.33	$25.07
Aviation						
493011	Aircraft Mechanics and Service Technicians		327	1.14	$24.69	$16.04
532011±	Airline Pilots, Copilots, and Flight Engineers		49	1.60	$78.43	$61.35
532012	Commercial Pilots		114	1.32	$39.84	$24.49
Total Targeted Occupations to be Served	**13**	**Total Annual Openings**	**13,381**	**Average Wage**	**$35.71**	**$24.99**
Source (w/exception of ±): 2018-19 Regional Demand Occupations List, Florida Dept. of Economic Opportunity ± Data from EMSI, Occupational Data Pull, 2018 * 2017 Hourly Wage Data						

In addition to the thirteen (13) targeted occupations covering InfoTech, aviation, and healthcare, *MDC WAVES* will further provide programs of study that prepare students to enter the fast-growing career fields of Geographic Information Systems Technician (Computer Occupations, All Others) and Electrical Engineering Technicians (Electrical and Electronics Engineering Technicians and Engineering Technicians, Except Drafters, All Others), with a focus on Simulation Technicians (SimTech). These occupations are aligned under the InfoTech industry sector.

As reflected *Table 2*, Geographic Information Systems Technician and Simulation Technician occupations are emerging so quickly that distinct standard occupational codes (SOCS) have not yet been identified to reflect openings, growth, and wages specific to these very specific occupations. Currently, these fast-growing careers are subcategories of existing SOCs reflected in *Table 2*.

Table 2 Additional Occupations Addressed by Proposal					
SOC Code	**Occupational Title**	**Annual Openings**	**Annual % Growth**	**Hourly Wage*** Mean	Entry
InfoTech					
17-3023±	Electrical and Electronics Engineering Technicians	7	1.4	$32.33	$25.74
17-3023.03 Electrical Engineering Technicians					
17.3029	Engineering Technicians, Except Drafters, All Other	4	2.1	$21.67	17.15
15-1199	Computer Occupations, All Other	28	1.9	$33.94	$23.10
15-1199.05 Geographic Information Systems Technicians					
17-3024.01 Robotics Technicians					
Source (w/exception of ±): U.S. Department of Labor, O*Net ± Data from EMSI, Occupational Data Pull, 2018 * = 2017 Hourly Wage Data					

D. Indicate how the training will be delivered (e.g. classroom-based, computer-based, other). If in-person, please identify the location(s) (e.g., city, campus, etc.) where the training will be available. If computer-based, identify the targeted location(s) (e.g., city, county, statewide) where the training will be available.

Training will be primarily classroom-based with a focus on incorporating campus-based simulation experiences into targeted programs. In-person, simulation components will be offered at the following Miami Dade College campuses, depending on program of study:

- Miami Dade College Medical Campus – In 1977, Miami Dade College opened its Medical Campus on 4.3 acres within the city's Medical/ Civic Center complex. Along with the other members of this complex, the University of Miami School of Medicine, Jackson Memorial Hospital, Veterans Administration Hospital and Miami-Dade County Public Health Service, the Medical Campus forms the backbone of Miami's health care community. The Medical/Civic Center area represents the second largest concentration of medical and research facilities in the United States and is located near Downtown Miami.
- Miami Dade College Wolfson Campus – The Wolfson Campus is located in downtown Miami. It is the only comprehensive urban campus in the city. Located within the city's financial, governmental, technological and cultural hubs, Wolfson capitalizes on its unique geographic resource by offering programs in banking/financial services, business, computer technology, paralegal studies,

architecture, economics, hospitality management, engineering, the arts, humanities and social sciences.

- Homestead Campus – Located in the historic downtown district of the city of Homestead, this 18-acre campus delivers a full-range of educational programs to its community. In addition to academic programs that include entertainment technologies, nursing, and the arts and sciences, the Homestead Campus is home to the Eig-Watson School of Aviation.

While simulation components of the targeted programs of study will be offered at the designated MDC campuses, as part of the overall programs of study, students may also participate in some courses at other MDC campuses, such as North, Hialeah, InterAmerican, Kendall, and West. In addition to classroom-based offerings, in conjunction with targeted programs, MDC's Virtual College may also provide online course offerings. Some courses may be offered in a blended format (combination of classroom and Internet-based instruction).

E. Indicate the <u>number of anticipated enrolled students and completers</u>.

MDC WAVES is expected to reach 2,064 enrolled students over the 24-month project period with enrollment projections shown in *Table 3*. *MDC WAVES* is expected to have 1,000 completers by the end of the project period.

Table 3 **Number of Anticipated Enrolled Students and Completers**		
Program	**Projected Enrollment***	**Number of Completers±**
InfoTech		
Geographic Information Systems – College Credit Certificate	45	12
Electrical Engineering – A.S. (w/ Simulation track)	30	0¥
Cybersecurity – A.S.	70	20
Cybersecurity – Industry Certifications	130	80
Digital Forensics – College Credit Certificate	50	25
Healthcare		
Respiratory Care	61	30
Clinical Laboratory Sciences / Medical Laboratory Technology	98	49
Physical Therapy Assistant	111	56
Medical Assisting	26	18
Registered Nurse – A.S. (Nursing - Generic, Accelerated, Transitions)	781	390
Registered Nurse (ADN) to BSN	370	185
Aviation		
Aviation Maintenance Management	122	49
Professional Pilot Technology	160	80
Certified Flight Instructor (CFI)	10	6
*Project enrollment numbers include students that may be enrolled in two programs (such as Cybersecurity – AS and Cybersecurity – Industry Certification and/or Digital Forensics – College Credit Certificate. ± Number of completers is based on new student enrollments and students currently enrolled that will benefit from enhanced courses and complete program(s) of study during project period. ¥ Represents new track within Electrical Engineering – 2-year, A.S. degree program; First cohort expected to complete semester after funded project period ends.		

It should be noted that enrollment and completion numbers include new students and students that may currently be enrolled in designated programs of study but that will benefit from courses that integrate simulation equipment and inclusion of MDC Works.

F. Indicate the <u>length of program</u> (e.g., quarters, semesters, weeks, etc.), including anticipated beginning and end dates.

Begin date: _01/01/2019_   End date: _12/31/2020___

Table 4 indicates the targeted programs with type of credential(s) to be earned and typical program length.

Program	Type of Credential Earned	Typical Program Length
Table 4 **Targeted Programs, Type of Credential, and Typical Program Length**		
InfoTech		
Geographic Information Systems	CCC	1 year
Electrical Engineering	A.S. (w/Simulation Technician track)	2 years
Cybersecurity	A.S.	2 years
Cybersecurity	Industry certifications (ComptTIA Security+, CCNA, CompTIA CySA+, CCNA Security, etc.)	1 month
Digital Forensics	(CCC	1 year
Healthcare		
Respiratory Care	A.S.	2 years
Clinical Laboratory Sciences / Medical Laboratory Technology	A.S.	2 years
Physical Therapy Assistant	A.S.	2 years
Medical Assisting	CTC	1 year
Registered Nurse – Generic	A.S.	4 semesters
Registered Nurse – Accelerated	A.S.	3 semesters
Registered Nurse – Transitions	A.S.	3 semesters
Registered Nurse (ADN) to BSN	BSN	3 semesters (FT)
Registered Nurse (ADN) to BSN	BSN	4 semesters (PT)
Aviation		
Aviation Maintenance Management	A.S.	4 semesters
Professional Pilot Technology	A.S.	4 semesters
Certified Flight Instructor (CFI)	ATC	3 semesters
Key: CCC = College Credit Certificate; CTC = Career Technical Certificate; ATC = Advanced Technical Certificate; AS = Associate in Science; BSN = Bachelor of Science in Nursing		

It should be noted that many programs incorporate stackable credentials so students can acquire college credit, a technical, or industry certificate, and obtain immediate employment, with the option to continue their postsecondary education. Articulation agreements are in place to provide credits towards a degree from the certificate(s) earned which provides a smooth transition in and out of education. Providing stackable credentials provides students with the ability to gain employment in a high-skill, high-wage occupation in a short period of time.

G. Describe the plan to support the sustainability of the proposal.

Primary expenses requested under this proposal are for equipment to enhance targeted programs of study. Equipment will be maintained through planned allocation of funds within general operating fund maintenance line item. Replacement costs, as needed, will be supplemented through planned allocation of depreciation costs to be calculated using life years expectation and/or recuperation of costs to allow for replacement. for purchased equipment.

Tuition and fees received from enhanced courses, which are expected to generate increased enrollment based on projected occupational growth in targeted occupations, will support targeted programs of study after completion of the funded project period.

H. Identify any certifications, degrees, etc., that will result from the completion of the program. Please include the Classification of Instructional Programs (CIP) code, if applicable.

Table 5 Certifications and Degrees with Crosswalk to Classification of Instructional Programs (CIP) Code, as applicable		
CIP Code	**Program**	**Type of Credential Earned**
InfoTech		
45.0702	Geographic Information Systems	CCC
14.1001	Electrical Engineering	A.S. (w/Simulation Technician track)
52.2101	Cybersecurity	A.S.
52.2101	Cybersecurity	Industry certifications (ComptTIA Security+, CCNA, CompTIA CySA+, CCNA Security, etc.)
43.0116	Digital Forensics	CCC
Healthcare		
51.0908	Respiratory Care	A.S.
	Clinical Laboratory Sciences / Medical Laboratory Technology	A.S.
51.0806	Physical Therapy Assistant	A.S.
51.0710	Medical Assisting	CTC
51.3801	Registered Nurse (Generic, Accelerated, Transitions)	A.S.
51.3801	Registered Nurse (ADN) to BSN	BSN
51.3801	Registered Nurse (ADN) to BSN	BSN
Aviation		
49.0104	Aviation Maintenance Management	A.S.
49.0102	Professional Pilot Technology	A.S.
49.0108	Certified Flight Instructor (CFI)	ATC
Key: CCC = College Credit Certificate; CTC = Career Technical Certificate; ATC = Advanced Technical Certificate; AS = Associate in Science; BSN = Bachelor of Science in Nursing		

I. Does this project have a local match amount? Yes or <u>No</u>
   If yes, please describe the entity providing the match and the amount.

No. No local match amount is being provided.

J. Provide any additional information or attachments to be considered for the proposal.

Please see employer partner letters of support provided as an attachment.

3. Program Budget

Estimated Costs and Sources of Funding: Include all applicable workforce training costs and other funding sources available to support the proposal.

A. Workforce Training Costs		
Equipment	$4,056,020	
Personnel	$351,910	
Facilities	$0	
Tuition	$0	
Training Materials	$0	
Other	$688,400	*Please specify:* Contractual costs, licensing fees, and service agreements – See budget narrative for description.
Indirect Costs	$104,031	
Total Project Costs	**$5,200,361**	
B. Other Workforce Training Funding Sources		
City/County	$-0-	
Private Sources	$-0-	
Other (grants, tec.)	$-0-	
Total Other Funding	$-0-	Please specify: N/A
Total Amount requested	**$5,200,361**	

Note: The total amount requested must equal the difference between the workforce training project costs in 3.A, and the other workforce training project funding sources in 3.B.

C. Provide a detailed budget narrative, including the timing and steps necessary to obtain the funding, how equipment purchases will be associated with the training program, if applicable, and any other pertinent budget-related information.

See following page

Budget Narrative

Equipment

Equipment is being purchased to support program enhancements, including the expanded integration of simulation in multiple program areas within InfoTech, Health Science and Nursing, and Aviation. Miami Dade College policy is to tag all equipment valued at $1,000 or more and all technology-related equipment. In addition, restricted accounts assign an account chartstring to grant-funded projects which allows for further identification of budget categories in which expenditures occur. All equipment purchases must follow MDC procurement and purchase policies and procedures. Equipment breakout by targeted sector and item is provided below. Equipment will be purchased within the first year of the project, with most equipment purchased within the first quarter of the project.

InfoTech – Within InfoTech, equipment is requested to support the GIS college credit certificate program. Equipment consists of precision laptops, virtual readers, GPS receptors, drone kits, and an eBee Drone Kit a fully autonomous mapping drone that can capture high-resolution aerial photos that can be transformed into accurate orthomosaics. It is considered industry standard.

Aviation – Aviation equipment is focused on enhancing the simulation experience of students participating in targeted programs of study through the purchase of industry-recognized simulation equipment. Specifically, through *MDC WAVES*, the School of Aviation is requesting to purchase a Flight Simulation Training Device (FTD) for fixed wing aircraft; an Advanced Aviation Training Device (AATD) for fixed wing aircraft; and two Flight Training Devices (FTDs) for two of the most used rotary wing aircraft. MDC is requesting these devices so that participants can be trained in these high demand occupations, with industry and Federal Aviation Administration-recognized simulation equipment. The FTDs will be certified by the Federal Aviation Administration (FAA) as Level 5 meaning they can be used to accumulate the equivalent of in-flight hours, but in a simulated environment on the ground. The pilot shortage in the United States continues to grow and academic institutions like MDC are creating accelerated learning pathways to produce more pilots. Incorporating FTDs and AATDs into the training curriculum reduces training costs for the student, enhances skills, and reduces the number of hours required to fly an actual aircraft. The FTDs and AATDs will also be used for training simulation technicians.

MDC Works - Limited equipment is requested for MDC Works. Requested equipment (laptops, video cameras, tripods, and microphones) will facilitate conducting mock interviews with students and career exploration assessments, as well as use of Handshake student-employer matching/engagement software for apprenticeship, internship, and career opportunities.

Healthcare – Equipment requested under healthcare will support targeted programs in the Health Sciences and Nursing. Additional equipment will support the overall simulation experience in a virtual, interdisciplinary hospital setting being established at MDC Medical Campus. All

equipment will be used to support the MDC Medical Campus interdisciplinary model. To assist in identifying the specific program areas, particularly within health sciences, that will be using the equipment, letter designations have been assigned. The key below identifies the program areas by letter designation:

Letter Designation	Program of Study
RET	Respiratory Therapy
CLS	Clinical Laboratory Sciences
MA	Medical Assisting
PTA	Physical Therapy Assistant
NUR	Nursing
SIM	Simulation

As noted in the table, equipment identified with the letter designation "SIM" will be used by multiple programs of study as part of the simulation environment being developed by the Medical Campus.

Equipment	Qty.	Unit Price	Total
InfoTech			
Precision Laptops	3	$3,500	**$10,500**
HTC Virtual Readers	3	$750	**$2,250**
GPS Receptors	5	$259	**$1,295**
Phantom 4 Pro Drone Kit	10	$2,000	**$20,000**
eBee Drone Kit	1	$18,000	**$18,000**

Code	Healthcare	Qty.	Unit Price	Total
RET	HAL S1030.L Airway Management Training Simulator	2	$17,090	**$34,180**
RET	Covidien Mechanical Ventilator – Puritan Bennet 980	2	$40,000	**$80,000**
CLS	Tosoh AIA 900 Immunoassay special chemistry analyzer	1	$53,558	**$53,558**
CLS	Vitek 2 Compact (3) system ID analyzer	1	$35,000	**$35,000**
CLS	Medtest DX BS480 chemistry analyzer	1	$57,300	**$57,300**
CLS	Cascade M4-Manual Coagulation analyzer	1	$51,168	**$51,168**
CLS	Peloris II Premium Tissue Processing System	1	$149,558	**$149,558**
MA	X-Ray Simulator L308 Console, Spectra 30 HF AP	1	$15,309	**$15,309**
MA	Ultimate Cart Package with Key Lock	4	$2,713	**$10,852**
PTA	Free Step SAS (Support Ambulated System) Harness, DLX	1	$60,318	**$60,318**
PTA	Armedica Performa Bar Activated 5-Section X-Frame Table	1	$9,052	**$9,052**
PTA	Hoyer Professional Presence Lift	3	$4,202	**$12,606**
PTA	Metron Value Deluxe Mat Platform, Burgundy	4	$3,433	**$13,732**
PTA	Vectra Neo Head/Tabletop System	4	$5,194	**$20,776**
NUR	Braun Infusomat Infusion Pump	24	$1,950	**$46,800**
NUR	Midmark Exam Table	22	$1,174	**$25,828**
NUR	Hill Rom MedSurg (MS) Bed w/ Non-air mattress	30	$3,750	**$112,500**

SIM	Giraffe Omnibed Carestation	2	$36,713	**$73,426**
SIM	Pediatric HAL light skin tone five-year old simulator S3005.L	2	$37,405	**$74,810**
SIM	Victoria light skin tone advanced birthing simulator S2200.L	2	$66,414	**$132,828**
SIM	Super Tory Newborn Patient Simulator S2200.PK.L	2	$42,045	**$84,090**
SIM	HAL light skin tone adult tether less simulator S3201.L	13	$52,559	**$683,267**
SIM	Welch Allyn Connex Integrated Wall Diagnostic System 85MXVEC-B	11	$4,818	**$52,998**
SIM	Phillips Respironics V60 Mechanical Ventilator	2	$13,775	**$27,550**
SIM	Lifepak 20e Defibrillator/Monitor Pacing, Masimo Pulse Ox	8	$9,483	**$75,864**
SIM	Lifepak 15 Defibrillator/Monitor Pacing	1	$10,175	**$10,175**
SIM	Ambulance Box Simulator (movement simulation – enclosed learning platform)	1	$74,000	**$74,000**
SIM	Ultrasound Training Solution – SonoSim including GME hardware bundle	1	$47,650	**$47,650**
SIM	Harmony Air HCE1600004 monitor carrier system, ceiling mounted	1	$38,770	**$38,770**
SIM	Pediatric Crib Stryker	1	$14,972	**$14,972**
SIM	Stretcher – Power-Pro-XT	1	$11,900	**$11,900**
SIM	Intensive Care Bed – TotalCare	3	$3,046	**$9,138**
Aviation				
Frasca Flight Simulation Training Device (FSTD) CRJ 200 - fixed wing aircraft		1	$975,000	**$975,000**
Frasca Cessna 172 Mentor Advanced Aviation Training Device (AATD) - fixed wing aircraft		1	$125,000	**$125,000**
Frasca Bell 407 Simulator FTD - rotary wing aircraft		1	$350,000	**$350,000**
Frasca Robinson R44 FTD - rotary wing aircraft		1	$350,000	**$350,000**
MDC Works				
Laptops w/full MS Office Suite and accompanying printer		2	$1,150	**$3,000**
Video Cameras		2	$300	**$600**
Tripods		2	$100	**$200**
Microphones		2	$100	**$200**
		Total Equipment		**$4,056,020**

Personnel

Three positions are requested:

1) Instructional Designer / Technology (MDC Works) – This full-time, 12-month position will be hired within two months of project start and will develop interactive career introduction, exploration, and activity information associated with services provided through MDC Works. The position will develop the framework and foundation, as well as initial materials that will be presented on touchscreens and monitors located throughout the MDC Works location. The position is temporary, time-limited. Activities conducted by the position will be able to be sustained once the initial formatting and

technology design, curriculum, and framework is developed and implemented. Salary is requested at $68,000 for year one only.

2) Career Workforce Readiness Advisor (Healthcare) – This full-time position will be hired within two months of project start. The Career Readiness Advisor will provide career advising, counseling and coaching sessions in person, by telephone and via email to students. The Advisor will assist with matching students with employers for internship opportunities and employment; assist students with creating, following, and adjusting their learning outcomes for internships; and designs and implement comprehensive career services programs for students. This position will specifically work with the School of Health Sciences and School of Nursing. Salary is requested at $49,686 for year one. A 3% COLA is requested for year 2, with salary adjusted to $51,177.

3) Career Workforce Readiness Advisor (InfoTech) – This full-time position will be hired within two months of project start. The Career Readiness Advisor will provide career advising, counseling and coaching sessions in person, by telephone and via email to students. The Advisor will assist with matching students with employers for internship opportunities and employment; assist students with creating, following, and adjusting their learning outcomes for internships; and designs and implement comprehensive career services programs for students. This position will specifically work with the School of Aviation and School of Engineering, Design, and Technology (InfoTech). Salary is requested at $49,686 for year one. A 3% Cost of Living Adjustment (COLA) is requested for year 2, with salary adjusted to $51,177.

The salaries requested are in accordance with MDC's policies and job descriptions. COLA are requested, as noted, in accordance with MDC policy, which requires Board of Trustee approval. Historically, the Board of Trustees has provided such approval on an annual basis.

Salaries				
Position	**Full/Part-time**	**Time (%)**	**Year 1**	**Year 2**
Instructional Designer/Technology – MDC Works	F/T	100%	$68,000	$0
Career Workforce Readiness Advisor - Healthcare	F/T	100%	$49,686	$51,177
Career Workforce Readiness Advisor - InfoTech and Aviation	F/T	100%	$49,686	$51,177
		Salary Totals	**$167,372**	**$102,353**

Fringe Benefits are calculated at 30.47% on allocated salaries for full-time employees and include Social Security, Medicare, FICA, Employer contribution to Florida Retirement System (FRS), Life, Dental and Health Insurance.

Fringe Benefits			
Benefit	**Percentage**	**Year 1**	**Year 2**
Social Security/FICA	6.20%	$10,377	$10,561
Medicare	1.45%	$2,427	$2,470
Health Insurance	13.50%	$22,595	$22,998
Dental Insurance	0.23%	$385	$392
Life Insurance	0.19%	$318	$324
Florida Retirement System (FRS)	8.9%	$14,896	$15,162
Fringe Benefits Totals		**$50,998**	**$51,907**

Facilities

No funds are requested

Tuition

No funds are requested

Training Materials

No funds are requested

Other

Consultants

Consultants will be contracted with to assist and advise on curriculum development to ensure alignment with industry needs and/or standards. and modification. Curriculum will be developed for a simulation technology (SimTech) focus track as part of MDC's A.S. degree in Electrical Engineering. In addition, consultant(s) will be contracted with to assist in developing environmental and urban modeling as part of the InfoTech Geographic Information Systems (GIS) College Credit Certificate (CCC) program. MDC will follow procurement policies and procedures established by its procurement department and approved by the Board of Trustees in its contract activities.

Consultants	Year 1	Year 2
Curriculum Developer Consultant – Simulation Technician (SimTech)	$25,000	$0
Environmental and Urban Modeling Consultant (InfoTech – GIS program)	$0	$25,000
Consultant Totals	**$25,000**	**$25,000**

Licensing fees, software, and service agreements

1) Handshake software – MDC Works will procure appropriate licenses for use of Handshake software. Handshake is used by over 700 of the nation's most selective colleges and universities as part of the career services continuum. The software seeks to connect students -- no matter where they live -- to potential employers. The software will

be used to complement services and to build employer partnerships for internships, apprenticeships, and employment opportunities for students.

2) Drone licenses – As part of the development and initiation of the GIS college credit certificate, MDC will secure the appropriate drone licenses. Twenty initial licenses will be secured at $500 per license.

3) Pix 4 Software license – Pix 4 software is professional-level drone and photogrammetry software that will be used in the GIS college credit certificate program to give students experience on software that is used within the industry in which they will be working.

4) Hydronia license – Hydronia is software that focuses on using GIS to calculate water flow patterns and trends. One component, RiverFlow2D, is a two-dimensional hydraulic model for rivers and estuaries that can also simulate sediment and pollutant transport and mudflows. It offers remarkably stable, accurate and fast finite-volume computations, accounting for subcritical and supercritical flows using refined flexible triangular-cell meshes.

5) Cyberbit Cybersecurity software – Cyberbit software is a complete incidence response platform that will provided students near real-world experience in responding to cyberattacks. The software will be used in the InfoTech programs focused on cybersecurity. The software will be housed in MDC's Cyber Range.

6) Service agreements – Service agreements will be secured as part of the purchase of simulation equipment for aviation and healthcare. The service agreements are necessary given the cost of the equipment and will facilitate timely repairs and updates, as needed.

Licensing Fees and Software	Year 1	Year 2
1. Handshake -licensing (MDC Works)	$120,000	$120,000
2. Drone licenses (InfoTech – GIS program)	$0	$10,000
3. Pix 4 Software license (InfoTech – GIS program)	$6,700	$6,700
4. Hydronia license (InfoTech – GIS program)	$2,500	$2,500
5. Cyberbit Cybersecurity software (InfoTech)	$70,000	$70,000
6. Service agreement (Aviation and Healthcare)	$75,000	$75,000
Licensing Fees and Software Totals	**$354,200**	**$284,200**

Renovations, accommodations for installation of simulator(s) and other equipment

MDC is requesting a one-time allocation of $80,000 to accommodate any identified renovations or other accommodations required as part of installation of simulation equipment. Examples of accommodations may include, but not be limited to, installation of thermostats and location-based cooling systems, mounting, and reinforcement of foundation.

Category	Total
Renovations and accommodations	**$80,000**

Indirect Costs

While MDC has a federally negotiated indirect cost rate of 48.3%, for this project indirect costs are being requested at 10% of modified total direct costs (direct costs minus equipment). Total

direct costs of $5,096,330, minus equipment ($4,056,020) for a modified direct cost base of $1,040,310. The modified direct base is multiplied by the requested 10% indirect rate to arrive at request for

Calculation	Total
$5,096,330 (DC) - $4,056,020 equipment = $1,040,310 modified direct costs x 10%	**$104,031**

TOTAL REQUESTED: **$5,200,361**

Cost per Participant

Estimating 2,064 students to be served via *MDC WAVES*, the cost per participant is $2,519.55.

4. Approvals and Authority

A. If entity is awarded grant funds based on this proposal, what approvals must be obtained before it can execute a grant agreement with the Florida Department of Economic Opportunity (e.g., approval of a board, commission or council)?

At the Board of Trustees meeting following application submission, the Board of Trustees is presented with the proposed project, target population, and requested amount for review and approval. The receipt of Board of Trustees approval prior to formal award eliminates the need to seek Board of Trustee approval post-award, facilitating timely, expeditious startup and implementation of the project. For this application, the proposal will be presented to the Board of Trustees at the November 20, 2018, Board of Trustees meeting.

B. If approval of a board, commission, council or other group is needed prior to execution of an agreement between the entity and the Florida Department of Economic Opportunity:

i. Provide the schedule of upcoming meetings for the group for a period of at least six months.

The following are the dates of the upcoming Board of Trustees meetings:
- November 20, 2018
- December 18, 2018
- January 15, 2019
- February 19, 2019
- March 19, 2019
- April 16, 2019

ii. State whether that group can hold special meetings, and if so, upon how many days' notice.

If needed, the District Board of Trustees of Miami Dade College can hold a special meeting with a 7-day notice.

September 7, 2018

Dr. Eduardo Padrón
President
Miami Dade College
300 NE 2nd Avenue
Miami, FL 33132

Dear Dr. Padrón:

It is my pleasure to provide this letter of partnership to Miami Dade College for its **W**orkforce **A**cceleration **V**ia **E**xploration and **S**imulation (WAVES) project being submitted to the Florida Department of Economic Opportunity for consideration under the Florida Job Growth fund. Our interest is mainly related to the component of Geographic Information Systems (GIS) that is an Information Technology component of the WAVES project.

We in the City of Coral Gables have been using GIS technology for over 20 years in support of our many operational areas in Public Works, Land Development, Public Safety, and resource management. During the past 10 years we have conducted a robust intern program with the local colleges and universities. These partnerships have evolved continually over this time, producing solid work products for our citizens and stakeholders; but, more importantly, they have provided valuable and practical skills and knowledge for the interns participating. All our GIS interns have leveraged their experience into professional occupations in GIS: urban planning, risk management and mitigation, public safety, and transportation. We, ourselves, have hired 3 of our interns, 2 of whom have gone on to succeed elsewhere in the GIS field.

In relation to this project, the City of Coral Gables is willing to provide

- Apprenticeship and pre-apprenticeship training opportunities
- Internships and other work-based learning experiences
- Contributing knowledge and data resources to support the education and career training program strategies;
- Assistance in curriculum development and/or review to ensure alignment
- Interviewing qualified program participants as part of the City's HR application process if openings arise and as deemed appropriate by the City;

This project has the potential to significantly increase the number of persons completing identified programs of study ready to meet the fast-evolving needs of targeted occupations in GIS. The project will also prepare many students for occupations of the future; those in development occupations that will become the targeted occupations of tomorrow.

We look forward to working with Miami Dade College and hope that *WAVES* will receive favorable review and consideration from the Florida Department of Economic Opportunity.

Sincerely Yours:

Raimundo Rodulfo, P.E.
Director of Information Technology

EC-Council
Hackers are here. Where are you?

September 17, 2018

Dr. Eduardo Padrón
President
Miami Dade College
300 NE 2ⁿᵈ Avenue
Miami, FL 33132

Dear Dr. Padrón:

It is my pleasure to provide this letter of partnership to Miami Dade College for its *Workforce Acceleration Via Exploration and Simulation* (WAVES) project being submitted to the Florida Department of Economic Opportunity for consideration under the Florida Job Growth fund.

About EC-Council:
The International Council of Electronic Commerce Consultants, better known as EC-Council, was founded in late 2001 to address the need for well-educated and certified information security and e-business practitioners. EC-Council is a global, member-based organization comprised of industry and subject matter experts all working together to set the standards and raise the bar in information security certification and education. EC-Council first developed the Certified Ethical Hacker (C|EH) program and coined the phrase "Ethical Hacking". Leveraging the collective knowledge from hundreds of subject matter experts, the C|EH program has rapidly gained popularity around the globe and is now delivered in more than 147 countries by more than 600 authorized training centers. More than 200,000 information security practitioners have been trained. C|EH is also a recognized high standard for many government entities and major corporations around the world. EC-Council certifications are viewed as crucial certifications needed when to stand out in your career, and provide a true, hands-on, tactical approach to Cybersecurity.
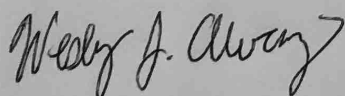
In relation to this project, EC-Council **is willing to provide** the following in support of this partnership;

- ☒ Apprenticeship and pre-apprenticeship training opportunities.
- ☒ Contribution of resources such as EC-Council courseware resources, Cyber Range access, and supplemental skills assessments and ancillaries to support the program.
- ☒ Assistance in curriculum development and/or curriculum review to ensure alignment with industry needs and necessary competencies.
- ☒ Commit to interviewing qualified program participants for appropriate positions, as available.

This project has the potential to significantly increase the number of persons completing identified programs of study ready to meet the fast-evolving needs of targeted occupations in healthcare, information technology, and aviation/aerospace. The project will also prepare many students for occupations of the future; those in development occupations that will become the targeted occupations of tomorrow.

We look forward to working with Miami Dade College and hope that *WAVES* will receive favorable review and consideration from the Florida Department of Economic Opportunity.

Best Regards,

Wesley J. Alvarez

Wesley Alvarez
Director of Academics, EC-Council

EC-Council   2502 N. Rocky Point Drive Ste. 670 Tampa, FL 33607

Baptist Health South Florida

September 17, 2018

Dr. Eduardo Padrón
President
Miami Dade College
300 NE 2nd Avenue
Miami, FL 33132

Dear Dr. Padrón:

It is my pleasure to provide this letter of partnership to Miami Dade College for its *W*orkforce *A*cceleration *V*ia *E*xploration and *S*imulation (WAVES) project being submitted to the Florida Department of Economic Opportunity for consideration under the Florida Job Growth fund.

Baptist Health South Florida is a large hospital system in South Florida that offers an extensive range of medical, surgical and technological services.

In relation to this project, Baptist Health South Florida is willing to provide

☐ Apprenticeship and pre-apprenticeship training opportunities
☒ Internships and other work-based learning experiences
☐ Contribution of resources such as [list specific resources such as financial, equipment/supplies, space, faculty, or other in-kind commitments] to support the program
☐ Assistance in curriculum development and/or curriculum review to ensure alignment with industry needs and necessary competencies
☐ Commit to interviewing qualified program participants for appropriate positions, as available.

This project has the potential to significantly increase the number of persons completing identified programs of study ready to meet the fast-evolving needs of targeted occupations in healthcare, information technology, and aviation/aerospace. The project will also prepare many students for occupations of the future; those in development occupations that will become the targeted occupations of tomorrow.

We look forward to working with Miami Dade College and hope that *WAVES* will receive favorable review and consideration from the Florida Department of Economic Opportunity.

Sincerely,

Frank Rivas
Corporate Laboratory Compliance Officer
Baptist Health South Florida8900 North Kendall Drive
Miami, FL 33176-2197
Tel: 786-596-5359
frankr@baptisthealth.net

Mount Sinai
MEDICAL CENTER

September 27, 2018

Dr. Eduardo Padrón
President
Miami Dade College
300 NE 2nd Avenue
Miami, FL 33132

Dear Dr. Padrón:

It is my pleasure to provide this letter of partnership to Miami Dade College for its *W*orkforce *A*cceleration *V*ia *E*xploration and *S*imulation (WAVES) project being submitted to the Florida Department of Economic Opportunity for consideration under the Florida Job Growth fund.
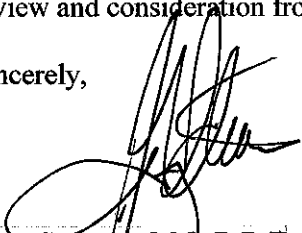
Mount Sinai Medical Center is a hospital located at 4300 Alton Road in Miami Beach, Florida, and is the largest independent non-profit hospital in South Florida. The institution was incorporated on March 11, 1946, and opened on its current location on Sunday, December 4, 1949.
Mount Sinai has 672 licensed beds, 5 satellite facilities, 700 physicians, 3500 employees and 500 volunteers.

In relation to this project, the Respiratory Care Department of Mount Sinai is willing to continue to provide a clinical site to assist training Respiratory Therapists, contributing resources necessary to provide this training, assistance in curriculum development and review to assure alignment with current industry needs. We also will continue our commitment to interviewing graduates for job placement.

This project has the potential to significantly increase the number of persons completing identified programs of study ready to meet the fast-evolving needs of targeted occupations in not only healthcare, information technology, and aviation/aerospace. The project will also prepare many students for occupations of the future; those in development occupations that will become the targeted occupations of tomorrow.

We look forward to working with Miami Dade College and hope that *WAVES* will receive favorable review and consideration from the Florida Department of Economic Opportunity.

Sincerely,

Gary C. Stone, M.S, R.R.T
Director of Respiratory/Pulmonary Services
Mount Sinai Medical Center
4300 Alton Road
Miami Beach, Florida. 33140

ORLANDO MOREJÓN, MD
11760 SW 40 St, Suite 722 / Miami, FL 33175
(305) 559-1883

September 17, 2018

Dr. Eduardo Padron
President
Miami Dade College
300 NE 2nd Avenue
Miami, FL 33132

Dear Dr. Padron,

It is my pleasure to provide this letter of partnership to Miami Dade College for its *W*orkforce *A*cceleration *V*ia *E*xploration and *S*imulation (WAVES) project being submitted to the Florida Department of Economic Opportunity for consideration under the Florida Job Growth fund.

Orlando Morejón, MD
Full time surgeon employed by Kendall Regional Medical Center
Specialties: general surgery, trauma surgery, surgical critical care

In relation to this project, Dr. Orlando Morejón from Kendall Regional Medical Center is willing to provide

☐ Apprenticeship and pre-apprenticeship training opportunities
☐ Internships and other work-based learning experiences
☒ Contribution of resources such as lectures on selected clinical topics by subject matter expert to support the program
☒ Assistance in curriculum development and/or curriculum review to ensure alignment with industry needs and necessary competencies
☐ Commit to interviewing qualified program participants for appropriate positions, as available.

This project has the potential to significantly increase the number of persons completing identified programs of study ready to meet the fast-evolving needs of targeted occupations in healthcare, information technology, and aviation/aerospace. The project will also prepare students for occupations of the future; those in development occupations that will become the targeted occupations of tomorrow.

We look forward to working with Miami Dade College and hope that *WAVES* will receive favorable review and consideration from the Florida Department of Economic Opportunity.

Sincerely,

Orlando Morejón, MD

AIRBORNE
R E S P O N S E

September 17, 2018

Dr. Eduardo Padrón
President
Miami Dade College
300 NE 2nd Avenue
Miami, FL 33132

Dear Dr. Padrón:

It is my pleasure to provide this letter of partnership to Miami Dade College for its **W**orkforce **A**cceleration **V**ia **E**xploration and **S**imulation (WAVES) project being submitted to the Florida Department of Economic Opportunity for consideration under the Florida Job Growth fund.

Airborne Response is a Miami-based small business founded in 2016. We provide unmanned aviation services for industry and government. Our flight teams capture aerial imagery and data in the world's most challenging environments. Our clients include Florida Power & Light Company, Citizens Insurance of Florida, and Miami-Dade Fire Rescue.

In relation to this project, Airborne Response is willing to provide:

- ☒ Apprenticeship and pre-apprenticeship training opportunities
- ☒ Internships and other work-based learning experiences
- ☒ Assistance in curriculum development and/or curriculum review to ensure alignment with industry needs and necessary competencies

This project has the potential to significantly increase the number of persons completing identified programs of study ready to meet the fast-evolving needs of targeted occupations in healthcare, information technology, and aviation/aerospace. The project will also prepare many students for occupations of the future; those in development occupations that will become the targeted occupations of tomorrow.

We look forward to working with Miami Dade College and hope that *WAVES* will receive favorable review and consideration from the Florida Department of Economic Opportunity.

Sincerely,

Christopher Todd
President

AIRT

September 18, 2018

Dr. Eduardo Padrón
President
Miami Dade College
300 NE 2nd Avenue
Miami, FL 33132

Dear Dr. Padrón:

It is my pleasure to provide this letter of partnership to Miami Dade College for its **W**orkforce **A**cceleration **V**ia **E**xploration and **S**imulation (WAVES) project being submitted to the Florida Department of Economic Opportunity for consideration under the Florida Job Growth fund.

AIRT, Inc. is a Florida-registered 501(c)3 non-profit, non-governmental organization that provides innovative airborne programs for disaster management and humanitarian aid. Our volunteers utilize aviation systems and aerospace technology to help those most in need when disaster strikes.

In relation to this project, AIRT is willing to provide:

⊠ Internships and other work-based learning experiences
⊠ Contribution of resources such as access to guest speakers and lectures, as well as unique special event programming including workshops and conferences to support the program.
⊠ Assistance in curriculum development and/or curriculum review to ensure alignment with industry needs and necessary competencies

This project has the potential to significantly increase the number of persons completing identified programs of study ready to meet the fast-evolving needs of targeted occupations in healthcare, information technology, and aviation/aerospace. The project will also prepare many students for occupations of the future; those in development occupations that will become the targeted occupations of tomorrow.

We look forward to working with Miami Dade College and hope that *WAVES* will receive favorable review and consideration from the Florida Department of Economic Opportunity.

Sincerely,

Christopher Todd
Executive Director
AIRT, Inc.

ALERT5
ENGINEERING ADVANCED SOLUTIONS

Alert5 International LLC
13499 Biscayne Blvd, Suite 1708
Miami, FL 33181
(513) 593-3441

September 17th, 2018

Dr. Eduardo J. Padrón, President
Miami Dade College
300 NE 2nd Ave, Room 1474,
Miami, FL 33132

Dear Dr. Padrón:

It is my pleasure to provide this letter of partnership to Miami Dade College for its Workforce Acceleration Via Exploration and Simulation (WAVES) project being submitted to the Florida Department of Economic Opportunity for consideration under the Florida Job Growth fund. Our interest is mainly related to the component of Geographic Information Systems (GIS) that is an Information Technology component of the WAVES project.

Alert5 utilizes sUAS (drones) to offer services such as professional imaging, video, engineering inspections, terrain data for GIS systems, and 3d models to public and private organizations across the country. When it comes to engineering analysis, no one comes close to being equal with Alert5 in having the track record for experience and success integrating sUAS throughout the diversity of the Civil/Environmental/Structural fields. Alert5 is based on not only a wealth of engineering experience and expertise over the last 20 years, but it also incorporates a decade of expertise in unmanned aviation design, testing and thousands of true unmanned flight hours. Our mission is to engineer the effective use of drones and remote operated vehicles from deployment to decision making. This includes development and maximization of hardware, coding and manipulation of software and implementation of protocols, procedures and personnel capabilities with the aim of achieving the most reliable data.

In relation to this project, Alert5 is willing to provide:

- Apprenticeship or pre-apprenticeship training opportunities
- Internships and other work-based learning experiences
- Assistance in curriculum development and/or review to ensure alignment
- Commit to interviewing qualified program participants and hiring, if appropriate

This project has the potential to significantly increase the number of persons completing identified programs of study ready to meet the fast-evolving needs of targeted occupations in GIS healthcare, information technology, and aviation/aerospace. The project will also prepare many students for occupations of the future; those in development occupations that will become the targeted occupations of tomorrow.

We look forward to working with Miami Dade College and hope that WAVES will receive favorable review and consideration from the Florida Department of Economic Opportunity.

Sincerely,

Rick Wygant
CEO
Alert5 International, LLC

Alert5 International, LLC
http://www.alert5intl.com/