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Research interviews conducted regarding the feasibility of establishing an  
Aviation Aerospace Training Program in the City of Fort Lauderdale

Industry Groups	Companies
Greater Miami Aviation Association	Tropic Ocean Airways
Career Source South Florida	AAR
Beacon Council	FEAM *
South Florida Aviation Maintenance Council	National Jet
South Florida Business Aviation Association	Banyan
Career Source Broward	Heico *
Greater Fort Lauderdale Alliance	GA Telesis
FXE Airport	International Aircraft Associates
South Florida Defense Alliance	Sintavia *
Career Source Palm Beach	Spirit Airlines *
South Florida Manufactures Association	Bombardier *
Space Coast EDC	Taking Aviation Forward
	ASI AERO Aeronautical Support International
	Turbine Management Solutions
	CIP-Cloud Investment Partners
	RESION
	AP&M
	Lockheed Martin *
	General Atomics ASI *
	Beehive3D *
	Lilium *
	Joby Aviation *

\* In process of scheduling interview

## FAA Part 141 Flight Schools in South Florida (SO-19)

*Data from latest FAA Aviation Data and Statistics Reports*

- 28 FAA Certified Flight Schools (126 total in Florida)
  - 6 located at FXE (Fort Lauderdale Executive Airport)
  - 6 located at HWO (North Perry Airport)
  - 3 located at LNA (Palm Beach County Park Airport)
  - 1 located at PMP (Pompano Beach Airpark)
  - 1 located at F45 (North Palm Beach County General Aviation Airport)
  - 1 located at MIA (Miami International Airport)
  - 4 located at OPF (Opa-locka Executive Airport)
  - 5 located at TMB (Kendall-Tamiami Executive Airport)
  - 1 located at X51 (Miami Homestead General Aviation Airport)
- Aircraft
  - Total 203
  - Low 0
  - High 34
  - Avg 7.25
- Flight Instructors
  - Total 244
  - Low 1
  - High 37
  - Avg 8.7

## FAA Part 142 Flight Simulator Schools in South Florida (SO-19)

*Data from latest FAA Aviation Data and Statistics Reports*

- 11 FAA Certified Flight Simulator Schools (51 total in Florida)
  - 1 located at FXE (Fort Lauderdale Executive Airport)
  - 8 located at MIA (Miami International Airport)
  - 2 located at FLL (Fort Lauderdale–Hollywood International Airport)
- Flight Instructors
  - Total 257
  - Low 3
  - High 90
  - Avg 23.4

## FAA Part 145 Repair Stations in South Florida (SO-19)

*Data from latest FAA Aviation Data and Statistics Reports*

- 392 FAA Certified Repair Stations in South Florida (603 total in Florida)
  - 321 Associated with local airport
    - 37 at FXE (Fort Lauderdale Executive Airport)
    - 27 at FLL (Fort Lauderdale–Hollywood International Airport)
    - 11 at HWO (North Perry)
    - 164 at MIA (Miami International Airport)
- Employees
 

○ Total	12,227
○ Low	0
○ High	1,012
○ Avg	31.3
- Distance from FXE (Fort Lauderdale Executive Airport)
 

○ 0-3 Miles	31
○ 3-5 Miles	9
○ 5-10 Miles	9
○ 10-20 Miles	40
○ 20-30 Miles	55
○ 30+ Miles	248
- Type
 

○ Accessory Repair	245
○ Airframe Repair	165
○ Instrument Repair	105
○ Powerplant Repair	114
○ Propeller Repair	4
○ Radio Repair	105
○ Non Destructive Testing	76
○ Specialized Services	78
○ Rotor Blades Repair	1

## FAA Part 147 Aviation Maintenance Technician Schools in South Florida (SO-19)

*Data from latest FAA Aviation Data and Statistics Reports*

- 2 FAA Certified Aviation Maintenance Technician Schools (15 total in Florida)
  - 1 located in Miami-Dade County
    - George T. Baker Aviation Technical College
    - Max authorized enrollment: 1242
    - 29 certified instructors (last reported)
    - 893 students enrolled (last reported)
    - Related Airport: MIA (Miami International Airport)
  - 1 located in Broward County
    - Broward College – South Campus
    - Max Authorized enrollment: 225
    - 13 certified instructors (last reported)
    - 150 students enrolled (last reported)
    - Related Airport: HWO (North Perry Airport)

## South Florida Schools, Colleges and Universities

### Aviation Programs

- 11 Major Colleges and Universities
  - o Atlantic Technical College (1 program)
  - o Broward College (25 programs)
  - o Embry-Riddle Aeronautical University (29 programs)
  - o Everglades University (10 programs)
  - o Florida International University (1 program)
  - o Florida Memorial University (3 programs)
  - o George T Baker Aviation Technical College (4 programs)
  - o Lynn University (14 programs)
  - o Miami Dade College (11 programs)
  - o Nova Southeastern University (1 program)
  - o University of Central Florida (1 program)
- Program Types
 

o Apprenticeship	1
o Certificates	
▪ Technical - Maintenance	7
▪ Technical - Avionics	3
▪ Technical – Other	10
▪ Graduate	9
o Associates	11
o Bachelors	20
o Masters	13
o Doctorate	2
o Minor	2
o Continuing Education	
▪ Drone	3
▪ Pilot	15
▪ Technical - Avionics	1

#### South Florida Schools (registered with the State of Florida DOE, non K-12, non aviation)

- Programs (duplicated)
 

o Palm Beach	419
o Broward	779
o Miami-Dade	1,225
- Programs (un-duplicated by CIP)
 

o Palm Beach	42
o Broward	136
o Miami-Dade	247

- Locations
  - o Palm Beach 83
  - o Broward 138
  - o Miami-Dade 208



## Aerospace in the State University System

March 2021

### Executive Summary

There is an abundance of both educational and research activity centered on supporting the aerospace industry in the State University System (SUS) of Florida. The term aerospace encompasses the atmosphere and the space beyond, considered as a whole. Typically, the aerospace industry is concerned with the design and manufacture of aircraft, rockets, missiles, spacecraft, and other devices that operate in aerospace. The SUS produced over 7,400 graduates in 2018-19, including over 5,400 engineers, with the potential to gain employment in the industry. For further and more detailed data, please reference the supplemental document titled "Degrees Awarded in Academic Programs Potentially Leading to Careers in the Aerospace Industry." The supplemental document contains detailed graduate counts by program, institution, and degree level.

Florida public universities have been recognized by rankings organizations for excellence in aerospace-related academic programs. For example, U.S. News & World Report recognized graduate engineering programs at the University of Central Florida (UCF) and the University of Florida (UF) in recent years. In 2020, UF's graduate-level Aerospace Engineering program ranked 16th and UF's graduate Mechanical Engineering program ranked 15th in the nation among public programs. UCF's graduate Aerospace Engineering program ranked 37th in the 2021 rankings for national public research universities, and UCF graduate engineering programs overall were ranked 43rd.

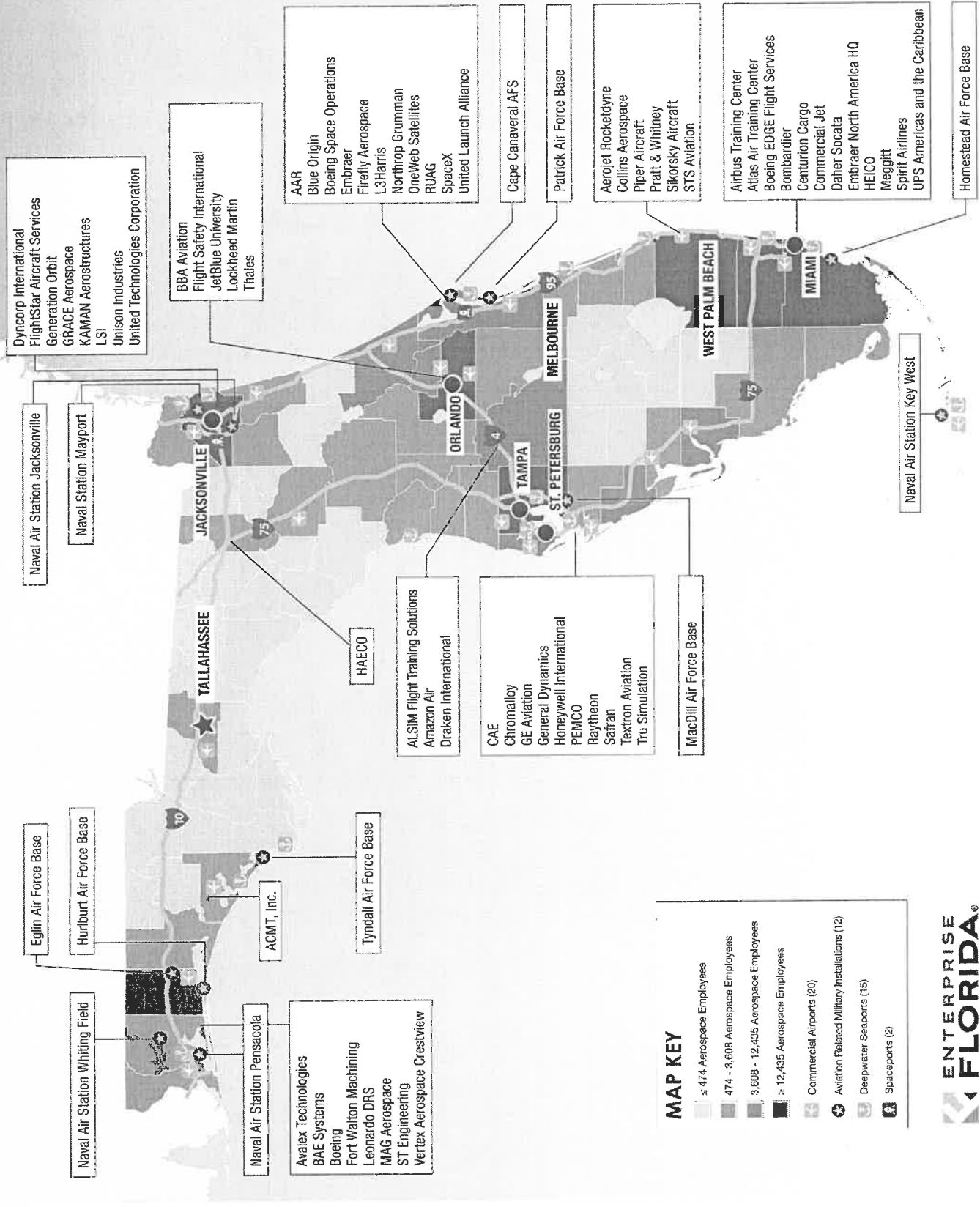
Florida institutions partner with a multitude of aerospace industry partners in a number of ways including student internship and employment opportunities, research collaborations, space sharing agreements, and more. These partners include both corporate and government entities such as the U.S. military and NASA. Millions of dollars in grants have been awarded to SUS institutional aerospace research efforts. For example, the University of Florida was awarded almost \$3.9 million in 2018-19 for aerospace-related projects. That amount increased to \$9.6 million in 2019-20 and increased again to over \$15.4 million in 2020-21.

Dozens of high-tech aerospace companies are operating in Florida such as Embraer, L3Harris, Northrop Grumman, and Made In Space. See the next page of this document for a map from Enterprise Florida showing Florida's aviation and aerospace cluster with the locations of many select companies highlighted as well as airports, spaceports, military installations, and aerospace employment density displayed.



# FLORIDA'S AVIATION & AEROSPACE CLUSTER

(select companies highlighted)



3/11/2021

The following is a sampling of the many aerospace highlights provided by SUS institutions in response to an informal survey of all institutions. For more detailed information, please refer to the document titled "Institutional Responses Regarding Aerospace Activity in the State University System."

### **Florida A&M Univeristy & Florida State University College of Engineering**

- Lead institution for the Florida Center for Advanced Aero-Propulsion (FCAAP), a multi-university, state-wide research, technology and education center
- Training diverse engineers of the future
  - 20% Black
  - 20% Hispanic
  - 28% Female

### **Florida Atlantic University**

- Several aerospace research and development projects and collaborations with companies and organizations such as
  - Pratt & Whitney, a Raytheon Technologies Company
  - Aerojet Rocketdyne
  - Belcan, LLC
  - Aerospace Technologies Group (ATG)
  - NASA

### **Florida International University**

- Engineering Mechanical, Aeronautical & Manufacturing was ranked in the 41-46 range for US Public in the QS World University Rankings by Subject in 2020
- Significantly increased graduate students in areas such as Radio Frequency/Wireless/Sensors, which are a key aerospace technology area for navigation, sensing, real time imaging and communication, by more than 100% in the last 3 years
- Projects with
  - Northrop-Grumman
  - Lockheed Martin
  - MITRE
  - DARPA and
  - several companies working with the U.S. Air Force Research Laboratory, the U.S. Army Research Office, and/or the U.S. Navy

## Florida Polytechnic University

- Offers an Aerospace concentration within the Mechanical Engineering Department including courses such as
  - Flight Performance Mechanics
  - Fundamentals of Aerodynamics
  - Introduction to Aero Structures
  - Orbital Mechanics
  - Propulsion and Combustion Systems
  - Mechanics of Composite Materials

## Florida State University

- Space Act Agreement - On 19 March 2019, NASA Langley Research Center and FSU signed a Space Act Agreement SAA1-29737. The agreement establishes a collaborative research effort between the NASA Langley Acoustic Liner Physics Team a team of researchers at FSU.
- Lead institution for the four FL universities in the FAA Center of Excellence in Commercial Space Transportation (a consortium of nine universities) established in 2010 by the FAA to address the broad range of issues in the newly emerging commercial space transportation sector.
- Consulting opportunities with
  - Cessna Aircraft
  - General Electric Company Aircraft Engineer Division
  - Goodrich Aerostructures
  - Lockheed Aircraft Company

## University of Central Florida

- Collaborates with more than 230 aviation, aerospace, and defense companies in the Orlando region.
- Number one nationally for the past six years in providing graduates for aerospace and defense-related jobs, according to *Aviation Week Network*.
  - Named the aerospace industry's second most preferred supplier of talent in the nation by *Aviation Week Network*, behind only the Georgia Institute of Technology
- U.S. News & World Report Rankings
  - Graduate aerospace engineering program is ranked 37th in the 2021 rankings for national public research universities
  - Overall, UCF's graduate engineering programs are ranked 43rd and its undergraduate engineering programs are ranked 47th among national public research universities
- Model internship programs such as work experience at Northrop Grumman and Lockheed Martin that allow students to gain real-world abilities and skills.
  - The Lockheed Martin College Work Experience Program, for example, provides over 800 paid opportunities a year to UCF students
  - Lockheed Martin hires more graduates from UCF than from any other university in the nation

## University of Florida

- Nearly \$10M in major aerospace grants awarded in 2019-20
- U.S. News & World Report Rankings – America’s Best Colleges: Undergraduate Engineering Specialties
  - 2021: Mechanical 33rd overall rank and 18th public rank
  - 2019: Aerospace 23rd overall rank and 15th public rank
- U.S. News & World Report Rankings – Best Graduate Schools
  - 2020: Aerospace 16th and Mechanical 15th
- The UF REEF Autonomy Lab provides an indoor, instrumented space for testing guidance, navigation, and control (GNC) algorithms on ground and aerial robots. The lab is equipped with a motion capture system for precision measurement of location to within a few centimeters or better. This lab is funded by Air Force Research Lab (AFRL), which transitions UF developed technologies to the Air Force and the aerospace industry.

## University of North Florida

- Several UNF faculty in Biology, Engineering, Physics, and Chemistry are involved in research related to the aerospace industry
- College of Computing, Engineering & Construction and the Department of Physics work with industry partners on student internships, career fairs, and employment with companies/organizations including
  - Andromeda Systems
  - Collins Aerospace
  - Drone Aviation Corp
  - General Dynamics
  - Honeywell
  - Made in Space
  - Modularity Space
  - Northrop Grumman
  - Piper Aircraft
  - United Airlines
  - U.S. Navy
  - NASA

## University of South Florida

- Recently designed, built, and launched three small satellites (each about the size of a sandwich) aboard the record-breaking SpaceX launch of 143 satellites
- Aerospace research and work is being done in Civil Engineering, including areas such as
  - Emerging technologies in the aerospace industry
  - Air traffic management and next generation air transportation systems
  - Air transportation network design and disruption management
  - Corridor-wide surveillance using unmanned aircraft systems
- Aerospace research and work is being done in Mechanical Engineering, including areas such as
  - Verification and validation of adaptive hypersonic vehicle control algorithms
  - Developing embedded distributed electric propulsion control system for electric vertical takeoff and landing (eVTOL) and urban air mobility (UAM) vehicles
  - Active wing shaping control for morphing aircraft
- Aerospace research and work is being done in Electrical Engineering, including areas such as
  - Small satellites
  - Integrated navigation and guidance for planetary precision landing
  - Development of navigation and communication strategies applicable to spacecraft formation constellations

## University of West Florida

- UWF has a facilities use agreement with Northrop Grumman (NG), and NG hires Hal Marcus College of Science and Engineering (HMCSE) interns to work in this space
- Mechanical Engineering (ME) has a student section of the American Institute of Aeronautics and Astronautics (AIAA) and regularly collaborates with the AIAA professional chapter at Eglin Air Force Base
- "Intro to Flight" is an elective course in the ME program, and the college of engineering has several flight-related competition teams

# Degrees Awarded in Academic Programs Potentially Leading to Careers in the Aerospace Industry

State University System of Florida

March 2021

Degrees Awarded in Programs Potentially Leading to Careers in the Aerospace Industry

Field	Program	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
Engineering	Aerospace, Aeronautical and Astronautical/Space En	228	234	242	220	318
	Bioengineering and Biomedical Engineering	196	240	254	266	309
	Biological/Biosystems Engineering	18	27	36	35	20
	Chemical Engineering	366	412	364	437	437
	Coastal & Ocean Engineering	63	57	60	50	50
	Computer and Information Sciences, General	3				
	Computer Engineering	510	504	569	573	607
	Computer Software & Media Applications Other	27	1			
	Computer Software Engineering		45	34	61	55
	Electrical and Electronics Engineering	1,067	1,188	1,259	1,158	1,093
	Industrial & Systems Engineering	194	224	223	176	207
	Industrial/Manufacturing Engineering	253	310	333	377	313
	Laser and Optical Engineering	39	46	41	46	48
Materials Engineering	155	137	206	169	176	
Mechanical Engineering	1,359	1,430	1,384	1,716	1,841	
Telecommunications Engineering	18	13	10	9	10	
<b>Engineering Total</b>		<b>4,496</b>	<b>4,868</b>	<b>5,015</b>	<b>5,293</b>	<b>5,484</b>
Engineering Technician	Electronic Engineering Technology	6	8	7	9	11
	Engineering Management				80	70
	Engineering Technologies and Engineering-Related F	13	25	31	26	28
	Engineering/Industrial Management	76	104	93	109	79
	Nanotechnology		4	15	11	7
	<b>Engineering Technician Total</b>		<b>95</b>	<b>141</b>	<b>146</b>	<b>235</b>
Mathematics & Statistics	Applied Mathematics, General	27	38	56	33	39
	Mathematics, General	499	482	491	496	501
<b>Mathematics &amp; Statistics Total</b>		<b>526</b>	<b>520</b>	<b>547</b>	<b>529</b>	<b>540</b>
Interdisciplinary Studies	Computational Science	10	20	13	30	36
	Computer and Information Sciences, Oth. Modeling and Simulation	36	52	31	25	36
<b>Interdisciplinary Studies Total</b>		<b>46</b>	<b>72</b>	<b>44</b>	<b>62</b>	<b>89</b>
Physical Sciences	Astronomy	13	13	25	21	16
	Atmospheric Sci. & Meteorology	54	38	29	29	34
	Chemical Sciences/Industrial Chemistry	33	29	19	19	10
	Chemistry	548	643	698	657	710
	Geophysical Fluid Dynamics	1	3	3	3	1
	Materials Science	4	2	5	5	4
	Oceanography/Marine Science	45	35	33	37	47
	Physics	300	313	314	319	286
	Radiation Physics	8	4	4	6	5
	<b>Physical Sciences Total</b>		<b>1,006</b>	<b>1,080</b>	<b>1,130</b>	<b>1,095</b>
<b>Grand Total</b>		<b>6,169</b>	<b>6,681</b>	<b>6,882</b>	<b>7,215</b>	<b>7,421</b>



Degrees Awarded in Programs Potentially Leading to Careers in the Aerospace Industry by Degree Level

Field	Program	Undergraduate	Graduate	2014-2015 Total	Undergraduate	Graduate	2015-2016 Total	Undergraduate	Graduate	2016-2017 Total	Undergraduate	Graduate	2017-2018 Total	Undergraduate	Graduate	2018-2019 Total	
Engineering	Aerospace, Aeronautical and Astronautical/Space	200	28	228	192	42	234	190	52	242	180	40	220	258	60	318	
	Bioengineering and Biomedical Engineering	105	91	196	141	99	240	146	108	254	162	104	266	203	106	309	
	Biological/Biosystems Engineering	18	18	36	27	36	63	27	36	63	36	36	72	20	20	40	
	Chemical Engineering	268	98	366	306	106	412	270	84	354	347	90	437	347	90	437	
	Coastal & Ocean Engineering	24	39	63	32	25	57	38	22	60	27	23	50	23	27	50	
	Computer and Information Sciences, General	3	3	6	3	3	6	3	3	6	6	6	12	6	6	12	
	Computer Engineering	332	178	510	374	130	504	426	143	569	426	147	573	508	99	607	
	Computer Software & Media Applications Other	27	27	54	1	1	2	1	1	2	2	2	4	1	1	2	
	Computer Software Engineering	644	423	1,067	678	510	1,188	666	593	1,259	648	510	1,158	665	428	1,093	
	Electrical and Electronics Engineering	128	66	194	151	73	224	133	90	223	103	73	176	127	80	207	
	Industrial & Systems Engineering	161	92	253	183	127	310	227	106	333	253	124	377	207	106	313	
	Industrial/Manufacturing Engineering	1	38	39	5	41	46	14	27	41	13	33	46	17	31	48	
	Laser and Optical Engineering	40	115	155	26	111	137	39	167	206	47	122	169	62	114	176	
	Materials Engineering	1,109	250	1,359	1,120	310	1,430	1,104	280	1,384	1,344	372	1,716	1,440	401	1,841	
	Mechanical Engineering	1,060	18	1,078	1,243	1,347	2,590	1,492	1,019	2,511	1,547	1,031	2,578	1,440	1,138	2,578	
Telecommunications Engineering	6	6	12	8	8	16	7	7	14	9	9	18	9	9	18		
Engineering Technician	Electronic Engineering Technology	6	6	12	8	8	16	7	7	14	9	9	18	9	9	18	
	Engineering Management	13	13	26	25	25	50	31	31	62	26	26	52	28	28	56	
	Engineering Technologies and Engineering-Related	13	13	26	25	25	50	31	31	62	26	26	52	28	28	56	
	Engineering/Industrial Management	76	76	152	104	104	208	99	99	198	109	109	218	79	79	158	
	Nanotechnology	19	19	38	4	4	8	15	15	30	11	11	22	7	7	14	
	Mathematics & Statistics	Applied Mathematics, General	27	27	54	38	38	76	56	56	112	33	33	66	39	39	78
		Mathematics, General	357	142	499	359	123	482	354	137	491	344	152	496	380	121	501
		Mathematics & Statistics (Other)	357	142	499	359	123	482	354	137	491	344	152	496	380	121	501
		Mathematics, General	4	6	10	6	14	20	4	9	13	3	7	10	6	13	19
		Computational Science	35	35	70	52	52	104	31	31	62	25	25	50	36	36	72
Computer and Information Sciences, Oth.		4	6	10	6	14	20	4	9	13	3	7	10	6	13	19	
Modeling and Simulation		35	35	70	52	52	104	31	31	62	25	25	50	36	36	72	
Modeling and Simulation		4	6	10	6	14	20	4	9	13	3	7	10	6	13	19	
Modeling and Simulation		4	6	10	6	14	20	4	9	13	3	7	10	6	13	19	
Modeling and Simulation		4	6	10	6	14	20	4	9	13	3	7	10	6	13	19	
Physical Sciences	Astronomy	8	5	13	8	5	13	14	11	25	11	10	21	8	8	16	
	Atmospheric Sci. & Meteorology	28	26	54	20	18	38	15	14	29	17	12	29	22	12	34	
	Chemical Sciences/Industrial Chemistry	24	9	33	29	19	48	19	19	38	19	19	38	19	10	29	
	Chemistry	418	130	548	471	172	643	474	224	698	460	197	657	505	205	710	
	Geophysical Fluid Dynamics	1	1	2	3	3	6	3	3	6	3	3	6	3	3	6	
	Materials Science	4	4	8	2	2	4	5	5	10	5	5	10	5	5	10	
	Mathematics	10	35	45	10	25	35	6	27	33	2	35	37	1	46	47	
	Oceanography/Marine Science	159	141	300	190	123	313	174	140	314	182	137	319	166	120	286	
	Physics	8	8	16	4	4	8	4	4	8	4	4	8	5	5	10	
	Radiation Physics	8	8	16	4	4	8	4	4	8	4	4	8	5	5	10	
Physical Sciences (Total)		4,095	2,074	6,169	4,411	2,270	6,681	4,425	2,457	6,882	4,725	2,490	7,215	5,074	2,347	7,421	
	Grand Total	4,095	2,074	6,169	4,411	2,270	6,681	4,425	2,457	6,882	4,725	2,490	7,215	5,074	2,347	7,421	

3/9/2021

**Degrees Awarded in Programs Potentially Leading to Careers in the Aerospace Industry by Institution & Degree Level**

Field	Program	Institution	Degree Level	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019		
Engineering	Aerospace, Aeronautical and Astronautical/Space En	UCF	BACCALAUREATE	88	111	105	97	152		
			MASTERS	8	10	17	14	23		
		UCF Total			96	121	122	111	175	
		UF	BACCALAUREATE	112	81	85	83	106		
			MASTERS	18	22	27	21	28		
			DOCTORATE	2	10	8	5	9		
		UF Total			132	113	120	109	143	
		Aerospace, Aeronautical and Astronautical/Space En Total			228	234	242	220	318	
		Bioengineering and Biomedical Engineering	FAMU	MASTERS				1		
				DOCTORATE						1
	FAMU Total					1	1			
	FAU		MASTERS	7	5	7	16	12		
			DOCTORATE							
	FAU Total			7	5	7	16	12		
	FGCU		BACCALAUREATE	17	30	38	31	24		
			DOCTORATE							
	FGCU Total			17	30	38	31	24		
	FIU		BACCALAUREATE	66	78	74	96	90		
		MASTERS	5	7	5	9	9			
		DOCTORATE	6	4	2	1				
	FIU Total			77	89	81	106	99		
	FSU	MASTERS			3	1	4	1		
		DOCTORATE			1	2		1		
	FSU Total				4	3	4	2		
	UCF	MASTERS					2	12		
		DOCTORATE								
	UCF Total						2	12		
	UF	BACCALAUREATE	22	33	34	35	89			
		MASTERS	35	31	57	28	37			
		DOCTORATE	18	17	16	17	12			
	UF Total			75	81	107	80	138		
	USF	MASTERS	16	28	13	25	17			
		DOCTORATE	4	3	4	2	4			
	USF Total			20	31	17	21			
	Bioengineering and Biomedical Engineering Total			196	240	254	266	309		
	Biological/Biosystems Engineering	UF	BACCALAUREATE	18	27	36	35	20		
			DOCTORATE							
	UF Total			18	27	36	35	20		
	Biological/Biosystems Engineering Total			18	27	36	35	20		
	Chemical Engineering	FAMU	BACCALAUREATE	1	6	5	3	6		
			MASTERS				1	3		
		FAMU Total			1	6	6	3	10	
		FSU	BACCALAUREATE	64	66	62	76	81		
			MASTERS	5	8	7	5	10		
			DOCTORATE	3	3	6	2	6		
		FSU Total			72	77	75	83	97	
		UF	BACCALAUREATE	132	143	114	130	128		
MASTERS			61	65	49	60	50			
DOCTORATE			16	18	20	11	11			
UF Total			209	226	183	201	189			
USF	BACCALAUREATE	71	91	89	138	132				
	MASTERS	9	7	5	11	7				
	DOCTORATE	4	5	6	1	2				
USF Total			84	103	100	150	141			
Chemical Engineering Total			366	412	364	437	437			
Coastal & Ocean Engineering	FAU	BACCALAUREATE	24	32	38	27	23			
		MASTERS	17	11	12	14	12			
		DOCTORATE	3	3	6	2	6			
	FAU Total			44	46	56	43	41		
	UF	MASTERS	15	9	3	4	4			
		DOCTORATE	4	2	1	3	5			
UF Total			19	11	4	7	9			
Coastal & Ocean Engineering Total			63	57	60	50	50			
Computer and Information Sciences, General	FGCU	BACCALAUREATE	3							
		DOCTORATE								
FGCU Total			3							
Computer and Information Sciences, General Total			3							
Computer Engineering	FAMU	BACCALAUREATE	5	6	8	4	3			
		DOCTORATE								
	FAMU Total			5	6	8	4	3		
	FAU	BACCALAUREATE	26	40	31	39	42			
		MASTERS	9	7	16	14	13			
		DOCTORATE	7	1	3	2	3			
	FAU Total			42	48	50	55	58		
	FIU	BACCALAUREATE	71	63	85	76	113			
MASTERS		17	24	38	27	16				
FIU Total			88	87	123	103	129			

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Field	Program	Institution	Degree Level	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
		POLY	BACCALAUREATE			1	25	29
		POLY Total				1	25	29
		FSU	BACCALAUREATE	19	25	33	27	14
		FSU Total		19	25	33	27	14
		UCF	BACCALAUREATE	101	90	109	117	113
			MASTERS	18	14	35	42	20
			DOCTORATE	2	7	5	7	9
		UCF Total		121	111	149	166	142
		UF	BACCALAUREATE	62	90	90	79	107
			MASTERS	89	47	19	28	10
			DOCTORATE	13	12	10	8	10
		UF Total		164	149	119	115	127
		USF	BACCALAUREATE	36	44	50	45	66
			MASTERS	16	8	12	7	7
			DOCTORATE	7	10	5	12	11
		USF Total		59	62	67	64	84
		UWF	BACCALAUREATE	12	16	19	14	21
		UWF Total		12	16	19	14	21
	<b>Computer Engineering Total</b>			<b>510</b>	<b>504</b>	<b>569</b>	<b>573</b>	<b>607</b>
	Computer Software & Media Applications Other	FGCU	BACCALAUREATE	27	1			
		FGCU Total		27	1			
	<b>Computer Software &amp; Media Applications Other Total</b>			<b>27</b>	<b>1</b>			
	Computer Software Engineering	FGCU	BACCALAUREATE		45	34	61	55
		FGCU Total			45	34	61	55
	<b>Computer Software Engineering Total</b>				<b>45</b>	<b>34</b>	<b>61</b>	<b>55</b>
	Electrical and Electronics Engineering	FAMU	BACCALAUREATE	3	11	6	2	2
			MASTERS			3	2	4
			DOCTORATE		2		1	
		FAMU Total		3	13	9	5	6
		FAU	BACCALAUREATE	49	54	49	56	51
			MASTERS	10	16	7	14	11
			DOCTORATE	7		3	3	2
		FAU Total		66	70	59	73	64
		FIU	BACCALAUREATE	121	136	102	109	93
			MASTERS	40	33	33	22	17
			DOCTORATE	6	15	14	22	17
		FIU Total		167	184	149	153	127
		POLY	BACCALAUREATE			2	28	25
		POLY Total				2	28	25
		FSU	BACCALAUREATE	50	47	60	37	46
			MASTERS	8	19	18	9	30
			DOCTORATE	7	5	8	11	10
		FSU Total		65	71	86	57	86
		UCF	BACCALAUREATE	139	169	171	127	131
			MASTERS	45	53	42	37	26
			DOCTORATE	14	16	15	19	14
		UCF Total		198	238	228	183	171
		UF	BACCALAUREATE	111	99	123	95	134
			MASTERS	117	176	231	165	135
			DOCTORATE	33	32	29	37	24
		UF Total		261	307	383	297	293
		UNF	BACCALAUREATE	20	32	18	26	37
			MASTERS	2	2	3	1	3
		UNF Total		22	34	21	27	40
		USF	BACCALAUREATE	87	83	70	98	94
			MASTERS	117	129	173	146	119
			DOCTORATE	17	12	14	21	16
		USF Total		221	224	257	265	229
		UWF	BACCALAUREATE	64	47	65	70	52
		UWF Total		64	47	65	70	52
	<b>Electrical and Electronics Engineering Total</b>			<b>1,067</b>	<b>1,188</b>	<b>1,259</b>	<b>1,158</b>	<b>1,093</b>
	Industrial & Systems Engineering	FIU	MASTERS					10
		FIU Total						10
		UF	BACCALAUREATE	128	151	133	103	127
			MASTERS	55	66	83	72	65
			DOCTORATE	11	7	7	1	5
		UF Total		194	224	223	176	197
	<b>Industrial &amp; Systems Engineering Total</b>			<b>194</b>	<b>224</b>	<b>223</b>	<b>176</b>	<b>207</b>
	Industrial/Manufacturing Engineering	FAMU	BACCALAUREATE	7	5	3	2	2
			MASTERS	1	3	2	4	2
			DOCTORATE			1	1	1
		FAMU Total		8	8	6	7	5
		FSU	BACCALAUREATE	19	33	32	42	38
			MASTERS	4	38	20	9	9

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Field	Program	Institution	Degree Level	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
			DOCTORATE		4	6	2	9
		FSU Total		23	75	58	53	56
		UCF	BACCALAUREATE	93	103	134	125	95
			MASTERS	57	48	31	45	43
			DOCTORATE	13	13	12	10	7
		UCF Total		163	164	177	180	145
		USF	BACCALAUREATE	42	42	58	84	72
			MASTERS	11	12	30	51	32
			DOCTORATE	6	9	4	2	3
		USF Total		59	63	92	137	107
	<b>Industrial/Manufacturing Engineering Total</b>			<b>253</b>	<b>310</b>	<b>333</b>	<b>377</b>	<b>313</b>
	<b>Laser and Optical Engineering</b>	UCF	BACCALAUREATE	1	5	14	13	17
			MASTERS	16	24	19	21	25
			DOCTORATE	22	17	8	12	6
		UCF Total		39	46	41	46	48
	<b>Laser and Optical Engineering Total</b>			<b>39</b>	<b>46</b>	<b>41</b>	<b>46</b>	<b>48</b>
	<b>Materials Engineering</b>	FIU	MASTERS	6	7	5	2	2
			DOCTORATE	3	3	6	5	6
		FIU Total		9	10	11	7	8
		UCF	MASTERS	11	12	6	8	4
			DOCTORATE	3	3	15	5	8
		UCF Total		14	15	21	13	12
		UF	BACCALAUREATE	40	26	39	47	62
			MASTERS	67	57	94	69	66
			DOCTORATE	20	22	22	20	16
		UF Total		127	105	155	136	144
		USF	MASTERS	5	7	19	13	12
		USF Total		5	7	19	13	12
	<b>Materials Engineering Total</b>			<b>155</b>	<b>137</b>	<b>206</b>	<b>169</b>	<b>176</b>
	<b>Mechanical Engineering</b>	FAMU	BACCALAUREATE	2	7	7	2	9
			MASTERS	1	1	2	1	
			DOCTORATE			1		
		FAMU Total		3	8	10	3	9
		FAU	BACCALAUREATE	63	64	75	70	82
			MASTERS	7	7	12	18	17
			DOCTORATE		4	1	5	2
		FAU Total		70	75	88	93	101
		FIU	BACCALAUREATE	103	125	122	150	176
			MASTERS	14	9	18	9	9
			DOCTORATE	4	4	2	3	2
		FIU Total		121	138	142	162	187
		POLY	BACCALAUREATE			6	53	60
		POLY Total				6	53	60
		FSU	BACCALAUREATE	102	111	89	112	116
			MASTERS	15	18	13	25	29
			DOCTORATE	5	6	3	11	11
		FSU Total		122	135	105	148	156
		UCF	BACCALAUREATE	331	339	319	318	380
			MASTERS	42	30	29	34	44
			DOCTORATE	11	14	8	15	18
		UCF Total		384	383	356	367	442
		UF	BACCALAUREATE	323	269	293	342	322
			MASTERS	80	152	105	152	142
			DOCTORATE	42	20	28	22	29
		UF Total		445	441	426	516	493
		UNF	BACCALAUREATE	49	54	34	74	70
			MASTERS	3	3	2	8	4
		UNF Total		52	57	36	82	74
		USF	BACCALAUREATE	136	151	159	212	197
			MASTERS	21	32	50	63	83
			DOCTORATE	5	10	6	6	11
		USF Total		162	193	215	281	291
		UWF	BACCALAUREATE				11	28
		UWF Total					11	28
	<b>Mechanical Engineering Total</b>			<b>1,359</b>	<b>1,430</b>	<b>1,384</b>	<b>1,716</b>	<b>1,841</b>
	<b>Telecommunications Engineering</b>	FIU	MASTERS	18	13	10	9	10
		FIU Total		18	13	10	9	10
	<b>Telecommunications Engineering Total</b>			<b>18</b>	<b>13</b>	<b>10</b>	<b>9</b>	<b>10</b>
<b>Engineering Total</b>				<b>4,496</b>	<b>4,861</b>	<b>5,019</b>	<b>5,291</b>	<b>5,484</b>
Engineering Technician	Electronic Engineering Technology	FAMU	BACCALAUREATE	6	8	7	9	11
		FAMU Total		6	8	7	9	11
	<b>Electronic Engineering Technology Total</b>			<b>6</b>	<b>8</b>	<b>7</b>	<b>9</b>	<b>11</b>
	Engineering Management	FIU	MASTERS				80	70
		FIU Total					80	70

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Field	Program	Institution	Degree Level	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019		
<b>Engineering Management Total</b>							80	70		
Engineering Technologies and Engineering-Related F				UWF	BACCALAUREATE	13	25	31	26	28
UWF Total						13	25	31	26	28
<b>Engineering Technologies and Engineering-Related F Total</b>						13	25	31	26	28
Engineering/Industrial Management				UCF	MASTERS	18	53	15	56	38
UCF Total						18	53	15	56	38
USF				MASTERS	58	51	78	53	41	
USF Total						58	51	78	53	41
<b>Engineering/Industrial Management Total</b>						76	104	93	109	79
Nanotechnology				UCF	MASTERS		4	15	11	7
UCF Total							4	15	11	7
<b>Nanotechnology Total</b>							4	15	11	7
<b>Engineering Technician Total</b>						95	141	146	235	195
<b>Mathematics &amp; Statistics</b>										
Applied Mathematics, General				FAU	MASTERS		5	10	2	2
FAU Total							5	10	2	2
FGCU				MASTERS	1	6	7	5	4	
FGCU Total						1	6	7	5	4
FIU				MASTERS	5	6	7	3	4	
FIU Total						5	6	7	3	4
UCF				MASTERS	9	12	21	13	17	
DOCTORATE						7	1	6	2	4
UCF Total						16	13	27	15	21
UNF				MASTERS	5	8	5	8	8	
UNF Total						5	8	5	8	8
<b>Applied Mathematics, General Total</b>						27	38	56	33	39
<b>Mathematics, General</b>										
FAMU				BACCALAUREATE	8	4	6	2	8	
FAMU Total						8	4	6	2	8
FAU				BACCALAUREATE	37	35	30	26	27	
MASTERS						13	8	11	12	7
DOCTORATE						5	5	4	6	6
FAU Total						55	48	45	44	40
FGCU				BACCALAUREATE	13	21	14	12	15	
FGCU Total						13	21	14	12	15
FIU				BACCALAUREATE	17	26	20	27	35	
FIU Total						17	26	20	27	35
FSU				BACCALAUREATE	69	91	69	66	47	
MASTERS						44	17	24	27	12
DOCTORATE						14	16	16	24	12
FSU Total						127	124	109	117	71
UCF				BACCALAUREATE	28	29	40	41	48	
UCF Total						28	29	40	41	48
UF				BACCALAUREATE	93	73	73	98	101	
MASTERS						6	17	15	14	15
DOCTORATE						7	9	8	10	12
UF Total						106	99	96	122	128
UNF				BACCALAUREATE	19	19	29	18	23	
UNF Total						19	19	29	18	23
USF				BACCALAUREATE	53	42	49	43	48	
MASTERS						16	8	7	8	9
DOCTORATE						6	3	11	12	11
USF Total						75	53	67	63	68
UWF				BACCALAUREATE	20	19	24	11	28	
MASTERS						31	40	41	39	37
UWF Total						51	59	65	50	65
<b>Mathematics, General Total</b>						499	482	491	496	501
<b>Mathematics &amp; Statistics Total</b>						525	520	547	525	540
<b>Interdisciplinary Studies</b>										
Computational Science				FSU	BACCALAUREATE	4	6	4	3	6
MASTERS						4	7	6	10	4
DOCTORATE						2	7	3	5	8
FSU Total						10	20	13	18	18
UCF				MASTERS					12	18
UCF Total									12	18
<b>Computational Science Total</b>						10	20	13	30	36
Computer and Information Sciences, Oth.				FIU	MASTERS					1
FIU Total										1
NCF				MASTERS					7	16
NCF Total									7	16
<b>Computer and Information Sciences, Oth. Total</b>									7	17
Modeling and Simulation				UCF	MASTERS	28	39	26	18	21
DOCTORATE						8	13	5	7	15
UCF Total						36	52	31	25	36
<b>Modeling and Simulation Total</b>						36	52	31	25	36
<b>Interdisciplinary Studies Total</b>						46	72	44	62	89
<b>Physical Sciences</b>										
Astronomy				UF	BACCALAUREATE	8	8	14	11	8

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Field	Program	Institution	Degree Level	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
			MASTERS	5	3	7	2	2
			DOCTORATE		2	4	8	6
		UF Total		13	13	25	21	16
	<b>Astronomy Total</b>			13	13	25	21	16
	Atmospheric Sci. & Meteorology	FSU	BACCALAUREATE	28	20	15	17	22
			MASTERS	18	11	9	7	10
			DOCTORATE	8	7	5	5	2
		FSU Total		54	38	29	29	34
	<b>Atmospheric Sci. &amp; Meteorology Total</b>			54	38	29	29	34
	Chemical Sciences/Industrial Chemistry	FSU	BACCALAUREATE	24	29	19	19	10
		FSU Total		24	29	19	19	10
		UCF	MASTERS	9				
		UCF Total		9				
	<b>Chemical Sciences/Industrial Chemistry Total</b>			33	29	19	19	10
	Chemistry	FAMU	BACCALAUREATE	8	6	3	7	11
			MASTERS	2	4	2	1	3
		FAMU Total		10	10	5	8	14
		FAU	BACCALAUREATE	38	45	35	25	35
			MASTERS		2	14	5	6
			DOCTORATE	3		4	5	5
		FAU Total		41	47	53	35	46
		FGCU	BACCALAUREATE	12	13	7	5	8
		FGCU Total		12	13	7	5	8
		FIU	BACCALAUREATE	82	118	113	107	97
			MASTERS	2	1	32	9	13
			DOCTORATE	14	15	16	22	22
		FIU Total		98	134	161	138	132
		FSU	BACCALAUREATE	27	31	35	26	20
			MASTERS	6	14	42	27	27
			DOCTORATE	18	30	19	23	25
		FSU Total		51	75	96	76	72
		UCF	BACCALAUREATE	26	25	39	37	41
			MASTERS		17	14	7	16
			DOCTORATE	17	13	4	14	15
		UCF Total		43	55	57	58	72
		UF	BACCALAUREATE	127	114	131	148	148
			MASTERS	11	11	15	11	16
			DOCTORATE	28	50	46	48	41
		UF Total		166	175	192	207	205
		UNF	BACCALAUREATE	15	21	21	18	36
		UNF Total		15	21	21	18	36
		USF	BACCALAUREATE	57	74	64	70	80
			MASTERS	6	5	3	4	7
			DOCTORATE	23	10	13	21	9
		USF Total		86	89	80	95	96
		UWF	BACCALAUREATE	26	24	26	17	29
		UWF Total		26	24	26	17	29
	<b>Chemistry Total</b>			548	643	698	657	710
	Geophysical Fluid Dynamics	FSU	DOCTORATE	1	3	3	3	1
		FSU Total		1	3	3	3	1
	<b>Geophysical Fluid Dynamics Total</b>			1	3	3	3	1
	Materials Science	FSU	MASTERS	2	2	2		1
			DOCTORATE	2		3	5	3
		FSU Total		4	2	5	5	4
	<b>Materials Science Total</b>			4	2	5	5	4
	Oceanography/Marine Science	FSU	MASTERS	13	5	4	13	8
			DOCTORATE	2	4	4	4	10
		FSU Total		15	9	8	17	18
		USF	MASTERS	12	12	9	9	14
			DOCTORATE	8	4	10	9	14
		USF Total		20	16	19	18	28
		UWF	BACCALAUREATE	10	10	6	2	1
		UWF Total		10	10	6	2	1
	<b>Oceanography/Marine Science Total</b>			45	35	33	37	47
	Physics	FAMU	BACCALAUREATE	3	3		1	1
			MASTERS			1	1	2
			DOCTORATE	3	1			2
		FAMU Total		6	4	1	2	5
		FAU	BACCALAUREATE	9	13	12	11	5
			MASTERS	4	1	6	2	7
			DOCTORATE	1	4	4	2	5
		FAU Total		14	18	22	15	17
		FIU	BACCALAUREATE	16	17	21	28	25
			MASTERS	2	9	9	2	10

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Field	Program	Institution	Degree Level	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
			DOCTORATE	4	4	6	5	5
		FIU Total		22	30	36	35	40
		FSU	BACCALAUREATE	26	18	33	11	22
			MASTERS	36	15	11	30	8
			DOCTORATE	16	19	26	10	16
		FSU Total		78	52	70	51	46
		UCF	BACCALAUREATE	26	22	23	22	25
			MASTERS	4	12	10	14	11
			DOCTORATE	21	17	14	13	12
		UCF Total		51	51	47	49	48
		UF	BACCALAUREATE	34	48	32	35	34
			MASTERS	9	9	12	19	15
			DOCTORATE	19	20	18	13	14
		UF Total		62	77	62	67	63
		UNF	BACCALAUREATE	16	20	15	22	19
		UNF Total		16	20	15	22	19
		USF	BACCALAUREATE	18	35	30	40	27
			MASTERS	14	5	10	10	7
			DOCTORATE	8	7	13	16	6
		USF Total		40	47	53	66	40
		UWF	BACCALAUREATE	11	14	8	12	8
		UWF Total		11	14	8	12	8
	<b>Physics Total</b>			<b>300</b>	<b>313</b>	<b>314</b>	<b>319</b>	<b>286</b>
	Radiation Physics	FSU	BACCALAUREATE	8	4	4	6	5
		FSU Total		8	4	4	6	5
	<b>Radiation Physics Total</b>			<b>8</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>5</b>
	<b>Physical Sciences Total</b>			<b>1,008</b>	<b>1,080</b>	<b>1,130</b>	<b>1,096</b>	<b>1,111</b>
	<b>Grand Total</b>			<b>6,169</b>	<b>6,681</b>	<b>6,882</b>	<b>7,215</b>	<b>7,421</b>