

December 7, 2017

Jacqueline M. Cade
Education Policy Analyst & ACM State Coordinator
Maryland Higher Education Commission
6 N. Liberty Street, 10th Floor
Baltimore, MD 21201

Re: Response to objection filed by UMBC in reference to proposed M.S. in Engineering Management at the Southern Maryland Higher Education Center

We are in receipt of the objection filed by UMBC to the proposed M.S. in Engineering Management at the Southern Maryland Higher Education Center. The objection claims that the proposed offering of a Master of Science in Engineering Management represents an unreasonable program duplication which would cause demonstrable harm to UMBC. UMBC cited the following statement as the basis for the objection:

"FIT expects at least 10 Washington DC Region personnel to enroll in the FIT programs per year."

Correction: This statement was mistakenly included in the M.S. in Engineering Management Educational Need section (a). This statement is part of the Educational Need section (a) for the M.S. and Post-Baccalaureate Certificate in Flight Test Engineering, included in the same submission. It was mistakenly copied and pasted in the M.S. in Engineering Management description. The statement has been removed, and is resubmitted as attached.

Additionally, FIT submits the attached analysis and supporting documentation that addresses Code of Maryland Regulations (COMAR) 13B.02.03.09 *Duplication of the Proposed Program.*

Please let us know if you have any questions.

Sincerely,

Dr. Robert R. Schaller, Sr.

Director, Patuxent River and SMHEC Sites

cc: Dr. Mary Bonhomme, Associate Provost, Department of Extended Studies
Dr. Mel Powell, Executive Director, Southern Maryland Higher Education Center

Attachments

- Letter of notice from MHEC dated November 30, 2017
- Letter of objection from UMBC dated November 29, 2017
- MHEC Renewal Authorization Letters 2015-2020 Patuxent and Aberdeen & Southern Maryland Higher Education Center
- MHEC Conditional Approval Letter for Southern Maryland Higher Education Center
- Revised Location Proposal, Master of Science in Engineering Management
- Education Partnership Agreement with Naval Air Warfare Center Aircraft Division
- Determination of Duplication Analysis
- MSEM Curriculum Comparison Between FIT and UMBC

Curriculum Comparison

FIT's Engineering Management. M.S.

http://catalog.fit.edu/preview program.php?catoid=5&poid=1438

2017-2018 Catalog Major Code: 8075

Degree Awarded: Master of Science

Delivery Mode(s): Classroom

Age Restriction: No

Admission Status: Graduate

Location(s): Aberdeen, Hampton Roads, Huntsville, Main Campus - Melbourne, Orlando,

Patuxent, Spaceport

Admission Materials: 3 letters of recommendation, résumé, objectives, GRE

The Master of Science in Engineering Management meets the professional needs of the engineer who, although working in a technical field, finds it necessary to update his or her skills in engineering, as well as acquire knowledge in the management of other engineers. Typically, engineers find that as they advance in their chosen fields, the challenges of management increasingly play a role in the overall responsibilities of the position. Many find their careers would best be served by a program addressing the management challenges of their job responsibilities. This interdisciplinary program is designed for those individuals.

Admission Requirements

An applicant for the master's program in engineering management should have a bachelor's degree from an ABET-accredited engineering program, though applicants with bachelor's degrees in physical sciences, computer science or mathematics will also be considered. Applicants who have an undergraduate GPA of less than 3.0 on a 4.0 scale may be asked to submit two letters of recommendation, a résumé, a statement of objectives and GRE results. All students are required to have a combined verbal/quantitative GRE score of 300 or higher (using the 130-170 point per part scoring system).

International applicants for whom English is not their primary language must submit internet-based TOEFL scores of 79 or higher in addition to the GPA requirement.

General admission requirements and the process for applying are presented in the Academic Overview section.

Degree Requirements

The degree requires a minimum of 30 semester credit hours. Students without adequate undergraduate courses in linear and matrix algebra, calculus, probability theory and/or statistics will be required to make up these deficiencies. Courses taken to satisfy these deficiencies or any other admission prerequisites cannot be counted toward the degree requirements. Thesis students must complete a minimum of six semester credit hours of ENM

5999 Thesis Research. More credit hours may be necessary to satisfactorily complete the thesis requirements, but only six may be counted toward the degree requirements. Nonthesis students must pass a final program examination during their final semester before graduation.

General degree requirements are presented in the Academic Overview section.

Curriculum

The master of science degree program consists of a set of required core courses and a set of elective courses as outlined below. Students who are newly admitted to the program must submit a program plan of study and have that program plan approved by their designated advisor and department head before registering for any course to be applied toward graduation requirements. Students must not register for any courses not on their approved program plan without the approval of their advisor and department head. Students pursuing this degree as a second or subsequent graduate degree must complete the change of major process and new program plan at least two semesters before graduation and no later than four weeks after starting the program. Only graduate courses in engineering, physical sciences, computer science or mathematics may be counted as transfer credit from the first graduate degree program.

There are five required core courses that all students must take, as listed below. Nonthesis students must take an additional five elective courses, subject to the restriction shown. Thesis students will substitute six semester credit hours of thesis for two elective courses.

Required Courses

- ENM 5100 Quality Engineering
- ENM 5200 Project Engineering
- ENM 5330 Topics in Engineering Operations and Logistics
- ENM 5420 Technology Commercialization Strategies
- ENM 5430 Strategic Situation Analysis Using Game Theory

Elective Courses

A comprehensive list of elective courses is maintained by the department and is available on the department's website, see http://coe.fit.edu/se/electives.php (summary list follows). Students must choose the appropriate number of courses from this list (five for nonthesis students and three for thesis students) to meet their elective course requirement.

Engineering-Oriented Electives

Students must select **three** courses from the following sections. No more than one course may be selected from any one section unless taken as part of a topic area that has been approved by the student's designated advisor and the department head.

Aviation Human Factors Aviation Science Aviation Technology Biomedical Engineering Chemical Engineering

Computer Sciences

Civil Engineering

Information Assurance and Cybersecurity

Electrical and Computer Engineering

Environmental Science

Human-Centered Design

Mechanical and Aerospace Engineering

Meteorology

Mathematics

Ocean Engineering

Oceanography

Operations Research

Physics

Space Sciences

Software Engineering

Systems Engineering

Management-Oriented Electives

Students must select **two** courses from the following sections. No more than one course may be selected from any one section unless taken as part of a topic area that has been approved by the student's designated advisor and the department head.

Aviation Management

Behavior Analysis

Business

Communication

Engineering Management

Humanities

Interdisciplinary Science

Management

Psychology

Special Topics/Projects Electives

Students may select **at most one** of the following courses to count as either an engineering-oriented elective or a management-oriented elective. Courses that may be used as an engineering-oriented elective are preceded by a "(E)" designation; courses that may be used as a management-oriented elective are preceded by a "(M)" designation.

- (E) CHE 5291 SPECIAL TOPICS IN CHEMICAL ENGINEERING
- (E) CHE 5292 SPECIAL TOPICS IN CHEMICAL ENGINEERING
- (E) CSE 5400 TOPICS IN COMPUTER SCIENCE
- (E) ECE 5270 SPECIAL TOPICS IN SYSTEMS
- (E) ECE 5370 SPECIAL TOPICS IN PHOTONICS

- (E) ECE 5371 SPECIAL TOPICS IN MICROELECTRONICS
- (E) ECE 5470 SPECIAL TOPICS IN ELECTROMAGNETICS
- (E) ECE 5495 SPECIAL PROJECT IN ELECTRICAL ENGINEERING
- (E) ECE 5570 SPECIAL TOPICS IN COMPUTER ENGINEERING
- (E) ECE 5595 SPECIAL PROJECTS IN COMPUTER ENGINEERING
- (E) ENS 5903 SPECIAL TOPICS IN ENVIRONMENTAL SCIENCE
- (E) MAE 5190 SELECTED TOPICS IN FLUID DYNAMICS
- (E) MAE 5290 SELECTED TOPICS IN HEAT TRANSFER AND ENERGY
- (E) MAE 5390 SELECTED TOPICS IN COMBUSTION AND PROPULSION
- (E) MAE 5490 SELECTED TOPICS IN SOLID MECHANICS, STRUCTURES AND MATERIALS
- (E) MAE 5690 SELECTED TOPICS IN SYSTEMS AND DYNAMICS
- (E) MAE 5790 SELECTED TOPICS IN BIOMEDICAL ENGINEERING
- (E) MAE 5890 SELECTED TOPICS IN AUTOMOTIVE ENGINEERING
- (E) MTH 5050 SPECIAL TOPICS
- (E) OCE 5903 SPECIAL TOPICS IN OCEAN ENGINEERING
- (E) OCN 5903 SPECIAL TOPICS IN OCEANOGRAPHY
- (E) ORP 5090 SPECIAL TOPICS IN OPERATIONS RESEARCH 1
- (E) PHY 5070 SPECIAL TOPICS IN PHYSICS
- (E) SPS 5088 SPECIAL TOPICS IN SPACE SCIENCES
- (E) SYS 5495 SPECIAL TOPICS IN SYSTEMS ENGINEERING
- (M) BUS 5070 SPECIAL TOPICS IN BUSINESS
- (M) COM 5420 SPECIAL TOPICS IN COMMUNICATION
- (M) ENM 5495 SPECIAL PROJECTS IN ENGINEERING MANAGEMENT
- (M) MGT 5070 SPECIAL TOPICS IN BUSINESS

Total Credits Required: 30

UMBC Master of Science in Engineering Management

The Engineering Management Program combines a practical business approach with an indepth technical track and emphasizes how to manage people and complex projects. The aim of the program is to provide students with a basic and focused set of advanced business and management skills coupled with advanced skills in a specific technical area commensurate with student's interests and likely technical employment. The combination of these advanced skills and knowledge will help students assimilate and integrate practical technical experience for the management of technology-based enterprises or government functions. Although not required for participating in this program, it is expected that students are, or intend to be, employed in a technology-oriented enterprise or government program.

Online or On Campus: On Campus

Admissions Requirements

A bachelor's degree in Engineering, Computer Science or Information Systems. GRE testing is not required. English proficiency testing (TOEFL/ IELTS) is required for international students. Please visit our website for detailed admissions requirements for international applicants.

MSc Engineering Management Program Requirements:

Students must complete 10 courses (30 credits) as follows:

Management courses (6 courses)

4 required core courses (12 credits)

2 elective courses (6 credits)

Engineering or Information Technology track courses (4 courses)

Download the <u>Academic Planning Form</u> as unofficial guidance in planning your MS program.

Required Core Management Courses (12 credits):

ENMG 650: Project Management Fundamentals OR ENMG 668: Project and SE Management

ENMG 652: Management, Leadership, and Communication

ENMG 656: Engineering Law and Ethics

ENMG 658: Financial Management

Elective Management Courses (students choose two):

ENMG 654: Leading Teams and Organizations

ENMG 659: Strategic Management

ENMG 660: Systems Engineering Principles *

ENMG 661: Leading Virtual/Global Teams

ENMG 663: Advanced Project Management Applications

ENMG 664: Quality Engineering and Management *

ENMG 672: Decision and Risk Analysis *

ENMG 690: Innovation and Technology Entrepreneurship

ENMG 692: Principles of Organization Learning

CYBR 620: Introduction to Cybersecurity *

CYBR 621: Cyber Warfare

CYBR 622: Global Cyber Capabilities and Trends

CYBR 623: Cybersecurity Law and Policy

Courses for Engineering and Information Technology Specializations

Before enrolling in any courses in Engineering, Computer Science, or Information Technology specializations, students should ensure that they meet the prerequisites for the course or receive permission from the course instructor. In addition, students should consult with the Engineering Management Graduate Program Director to ensure selected courses meet program requirements.

To achieve technical depth in a discipline, students are encouraged to take **four** courses from one of the following specializations. However, students may take courses from multiple specializations.

See each specialization for a sample list of courses and descriptions:

Chemical/Biochemical Regulatory Engineering

Chemical Engineering

Computer Engineering

Computer Science

Cybersecurity

Electrical Engineering

Environmental Engineering

Human Centered Computing

Information Systems

Mechanical Engineering

Systems Engineering

^{*} Courses marked with an asterisk can be counted as either a management elective or technical elective.



AN HONORS UNIVERSITY IN MARYLAND

Office of the Provost

University of Maryland, Baltimore County 1000 Hilltop Circle Baltimore, Maryland 21250

PHONE: 410-455-2333 FAX: 410-455-1107 WEB: www.umbc.edu

November 29, 2017

Dr. James D. Fielder, Jr. Secretary Maryland Higher Education Commission 6 N. Liberty Street, 10th Floor Baltimore, MD 21201

Dear Dr. Fielder,

I am writing concerning the proposal submitted by the Florida Institute of Technology (FIT) to offer a Master of Science in Engineering Management program at the Southern Maryland Higher Education Center.

UMBC agrees with FIT's statement that "Department of Defense (DoD) Acquisition Programs in the Washington DC Region could benefit from employees with education and training in Engineering Management." UMBC offers a Master of Science in Engineering Management program and courses at its campus to benefit employers in the Washington DC region, as well as the Baltimore region. FIT's statement "FIT expects at least 10 Washington DC Region personnel to enroll in the FIT programs per year." represents an intention on FIT's part to directly compete with UMBC by offering the same program to the same prospective students in the Washington DC region. UMBC therefore is filing an objection to FIT's proposed offering of a Master of Science in Engineering Management on the grounds that it represents an unreasonable program duplication which would cause demonstrable harm to UMBC.

Thank you for the opportunity to express UMBC's objection to the program proposed by the Florida Institute of Technology.

Sincerely,

Antonio Moreira, Ph.D.

Vice Provost for Academic Affairs

Cc: Dr. Philip Rous, Provost and Senior Vice President for Academic Affairs



Boyd K. Rutherford Lt. Governor

Anwer Hasan Chairperson

James D. Fielder, Jr., Ph.D. Secretary

November 30, 2017

Dr. Robert Schaller Director and Associate Professor, SMHEC Site Florida Institute of Technology 21803 Three Notch Rd. Lexington Park, MD 20653

Dear Dr. Schaller:

I am forwarding to you a copy of the letter of objection received from the University of Maryland Baltimore County (UMBC) in response to Florida Institute of Technology (FIT)'s proposal to offer the Master of Science in Engineering Management at the Southern Maryland Higher Education Center.

Please review the enclosed document and forward to the Commission your written comments and reactions by December 14, 2017. Particular attention should be given to the Code of Maryland Regulations (COMAR) concerning criteria for approving proposed programs, especially unreasonable program duplication that would cause demonstrable harm to another institution, addressed in COMAR 13B.02.03.09, and also compelling regional need and demand issues as outlined in COMAR 13B.02.03.08. The Commission will include consideration of your response in making its program approval decision.

If you have any questions related to the letter or the review process, please feel free to contact me by telephone at: 410-767-3303, or by email at: jacqueline.cade@maryland.gov.

Sincerely,

Jacqueline M. Cade

Education Policy Analyst

Enclosure

cc: Dr. Antonio Moreira, Vice Provost for Academic Affairs, UMBC

Dr. Philip Rous, Provost and Senior Vice President for Academic Affairs

C. Determination of Duplication

- 1. The degree to be awarded: M.S. in Engineering Management
- 2. The area of specialization: Management of engineering programs, in particular in naval aviation test & evaluation at NAS Patuxent River
- 3. The purpose or objectives of the program to be offered:

The Master of Science in Engineering Management meets the professional needs of the engineer who, although working in a technical field, finds it necessary to update his or her skills in engineering, as well as acquire knowledge in the management of other engineers. Student learning objectives include:

- Develop, lead, and evaluate effective engineering teams and projects.
- Lead complex engineering and technical programs and organizations while considering both technical and management factors in decision making involving resources.
- Design and analyze engineering systems and operations with more strategic insight.
- Broaden the scope of decision making through consideration of technical performance, cost, and schedule factors.
- Employ both qualitative and quantitative analysis tools and techniques in problem solving.
- Communicate effectively with both technical and nontechnical personnel throughout the enterprise.
- Manage the practice of engineering with economic and ethical sustainability in mind.
- Integrate major concepts from quality engineering, project engineering, engineering operations and logistics, technology commercialization, and strategic situation analysis.
- Appreciate and foster the need for life-long learning and personal development.
- 4. The specific academic content of the program: see Curriculum Comparison
- 5. Evidence of equivalent competencies of the proposed program in comparison to existing programs

A comparison of M.S. Engineering Management program curriculum offered by FIT and UMBC reveals the following:

Similarities:

- Both 30 credit hours for completion
- Both delivered in the classroom

Differences:

- FIT at SMHEC's geographic coverage is limited to the 3 counties of Southern Maryland: St. Mary's, Calvert, and Charles whereas UMBC's location in Catonsville serves Baltimore County and adjacent jurisdictions. The two locations are at least 85 miles apart.
- Overall, the FIT program has more technical emphasis than the UMBC program:
 - Admission requirements: FIT applicants are required to take the GRE and should hold a bachelor's degree from an ABET-accredited engineering program. UMBC applicants are not required to take the GRE nor hold an ABET-accredited undergraduate degree.
 - Curriculum: FIT requires 5 technical core courses and 3 technical elective courses for a total of 8 technical courses. UMBC requires 4 technical elective courses.
- FIT's primary focus is serving the unique, technical needs of NAS Patuxent River

6. Analysis of the market demand for the program

Total FIT MSEM enrollments (main campus and all off-campus locations) average 40-50 per year. Patuxent represents about 10% of total enrollments. A total of 102 MSEM degrees have been awarded at Patuxent since 1982. SMHEC enrollment projections are expected to be small but steady, averaging 3-5 students annually. An annual source of enrollments is from NAS Patuxent River. FIT holds an articulation agreement with the U.S. Naval Test Pilot School at NAS Patuxent River for the MSEM program. USNTPS graduates accepted into the MSEM program receive 9 transfer credit hours for ENM 5200 Project Engineering (core course), SYS 5310 Systems Engineering Principles and MAE 5690 Selected Topics in Combustion and Propulsion (technical electives). A copy of the transfer credit agreement follows. USNTPS is the U.S. Navy's premier school for flight test pilots and engineers that runs 2 cohorts of 30+ students each year. For more information on USNTPS

see http://www.navair.navy.mil/nawcad/index.cfm?fuseaction=home.content_detail&k ey=7EA6B90D-63BF-404B-BCE1-74DECEF28E38

(Cpy: (MAE)/ Flight Test ENgig (HERU)

EVALUATION OF MILITARY SCHOOL COURSE FOR TRANSFER CREDIT Extended Studies Division

			DATE
1.	Course	to be transferred:	
1,	++	Number:USNTPS	
	a. b.	Title: Navy	Toot Dilet Saland
		School: U.S. Navy Test	
	C.	Date course initiated:	
	d.		
	е.	New or Replacement co	urse (specify): Rev. July 2015
	f.		(500) Contact Hours = 11 months
	g.	Level: Gradu	
	h.	Grading: Numeric - %80	= passing
	i.	ACE recommendation:	None
	j.	Course description:	See complete current POI
2.	Univ. e	quivalent course:	
	a.		(S 5310, MAE 5690, MAE 5701, MAE 5702, MAE 5703
	b.	Title: See Univ. catal	
	C,		duate) credit hours each course
	d.	Level: Gradu	
	c	Degree programs applic	able: Engineering Mgt (8075), Project Mgt (8357)
	f.	Course description:	Flight Test Engineering (8233) See Univ. catalog
4. transfer	red to an	college/university in the nend <u>9 or 12 grad</u> cr niffed students who are a	edit hours for the univ. equivalent courses in paragraph 2 above be dmitted to an applicable graduate degree program who start the course in
paragra	ph I on o	r after Jaly 2015	(date).
	On File	(T.A. Davis)	Hamid Hefazi, Ph.D. Professor and Department Head
Represe	entative, i	Military School	Mechanical & Aerospace Enginee ing
			Muzaffar A. Shaikh, Ph.D. Reviessor and Department Head
		·	Engineering Management / Systems Engineering
			Cha Rlen
			Ted Richardson, Ph.D., Professor and Senior Associate Dean Extended Studies

7. Examination of additional factors:

a. Role and mission: FIT is approved by the Southern Maryland Higher Education Center to offer this program as part of their educational mission. Missions of both organizations follow.

Action: Approved for 9 graduate credit hours (ENM 5200, SYS 5310, MAE 5690) toward an M.S. in Engineering Mgt or an M.S. in Project Mgt. Approved for 12 graduate credit hours (ENM 5200, MAE 5701, MAE 5702, MAE 5703) toward an M.S. in Flight Test Engineering.

Florida Institute of Technology

http://web2.fit.edu/about/

Our Mission: Florida Institute of Technology's mission is to provide high-quality education to a culturally diverse student body in order to prepare students for entering the global workforce, seeking higher-education opportunities, and serving within their communities. The university also seeks to expand knowledge through basic and applied research and to serve the diverse economic, cultural, and societal needs of our local, state, national and international constituencies.

Off-Site Locations

Message from the Associate Provost of Extended Studies http://es.fit.edu/ and http://es.fit.edu/message.php

Florida Tech has been offering off-site degree programs since 1972, when the university began offering specialized master's degrees at the Patuxent River Naval Air Station in Maryland... Our university has a solid history of offering quality degree programs to members of the military, government service employees and other working professionals on an international basis. Students can study at any one of 15 off-campus sites in five states including distance learning programs that are taught through our Virtual Campus.

Southern Maryland Higher Education Center

http://www.smhec.org/mission-statement.html
(Approved by the SMHEC Board of Governors on September 23, 2010)

Summary Mission Statement: The Southern Maryland Higher Education Center focuses on providing highly developed and comprehensive academic and professional development educational opportunities at the graduate and upper undergraduate level to a workforce of knowledge workers engaged in technology, teaching, management, health and other professional services. The academic programs and other professional development opportunities offered by distinguished universities recruited by the Center for presentation provide an opportunity for citizens in the region to achieve their potential in their chosen professional fields and to advance the economic and social development of the region. The Center also facilitates the advancement and growth of the Naval Air Base at Patuxent River through partnerships with nationally ranked universities providing high technology and management academic programs facilitating the creation of a new national high technology center of excellence in multiple naval aviation specializations.

Additionally, FIT holds an Education Partnership Agreement (EPA) with Naval Air Warfare Center Aircraft Division (NAWCAD) with the following Purpose (Paragraph V):

"The purpose of this Agreement is to encourage and enhance the study of Business Financial Management, Acquisition & Contracts, Logistics, and STEM related careers. This Agreement will allow the Partners to mutually aid in the educational experience of FIT business financial management, acquisition, logistics, flight test, engineering, science and mathematics students and faculty by providing a mechanism by which those students and faculty can benefit from the expertise, unique facilities and equipment related to the Partners."

The agreement is attached.

b. Accessibility: FIT is fully compliant with the Americans with Disabilities Act and related Maryland regulations. Internal policy and guidance follows.

Student Handbook

https://policy.fit.edu/student-handbook Notice of Nondiscrimination/Affirmative Action Effective Date Aug 1, 2009

Florida Tech, a private educational institution, is committed to the principle of equal opportunity for all qualified persons, welcomes students of all backgrounds and takes pride in the diversity of its faculty and staff. It assures students of access to all the privileges, programs and activities generally accorded and made available to the university.

Florida Tech strongly supports affirmative action principles and does not discriminate on the basis of creed, religion, national origin or ancestry, age, race, color, marital status, Vietnam-era veteran status, gender, sexual orientation or disability in the administration of its educational programs, admissions policies, financial aid programs, athletics, co-curricular activities or other college administered programs. Any adverse action or personnel action or other act of discrimination, based on the above may be the basis for filing a complaint of discrimination. Any student, applicant for employment or employee at Florida Tech, who believes that he or she has been discriminated against, may file a complaint of discrimination.

Students are encouraged to use the formal university chain of supervision (i.e., the Office of the Dean of Students, the instructor, the academic unit/office chairperson and/or appropriate academic dean) to seek relief or redress before filing a complaint of discrimination. Employees may bring complaints to their supervisor or the Office of Human Resources.

Geographic Proximity

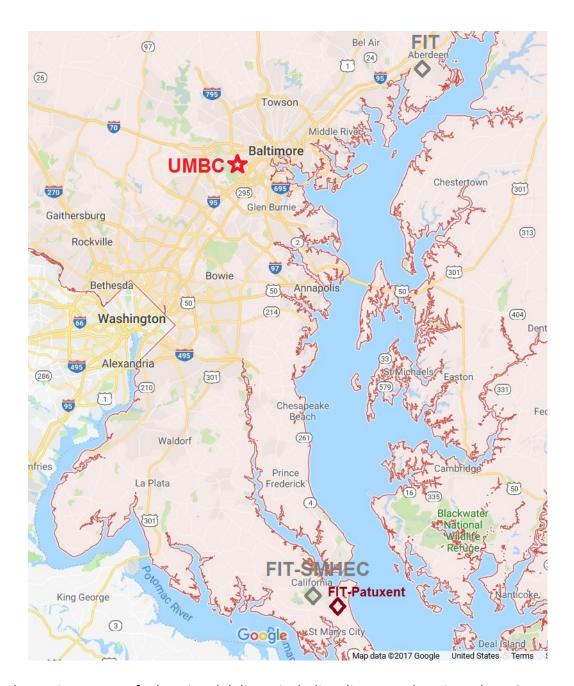
FIT is approved to offer the MSEM program at 2 locations in Maryland: Patuxent River and Aberdeen. The map that follows shows the geographic proximity of these two FIT locations relative to UMBC. FIT's sites at Patuxent and SMHEC are but 7 miles apart. The distance between FIT-SMHEC and UMBC is at least 85 miles. FIT-Aberdeen is located 43 miles northeast of UMBC. We do not presently have nor expect students outside of Southern Maryland to enroll in MSEM classes at FIT-SMHEC.

The referenced statement cited by UMBC was mistakenly included in the M.S. in Engineering Management Educational Need section (a):

"FIT expects at least 10 Washington DC Region personnel to enroll in the FIT programs per year."

This statement is part of the Educational Need section (a) for the M.S. and Post-Baccalaureate Certificate in Flight Test Engineering (FTE), included in the same submission. The FTE program is new and unique. No other institution offers it so we expect enrollment interest outside of Southern Maryland.

The statement was mistakenly copied and pasted in the M.S. in Engineering Management (MSEM) description. The MSEM program has been offered at both FIT Patuxent River and Aberdeen sites since the late 1970s as part of our off-site mission to support the technical needs of these two important military installations in Maryland.



- c. Alternative means of educational delivery including distance education: The MSEM program is approved for delivery in the classroom. It is offered exclusively on main campus in this format. Due to the transient nature of military assignments, the Engineering Systems Department allows FIT Extended Studies to deliver up to 4 of the 10 courses online: two of the five core courses and two of the five elective categories. Most FIT students prefer face-to-face to online delivery, thus online delivery is often not required.
- d. Analysis of enrollment characteristics

Location is a major factor (see Geographic Proximity)

- e. Residency requirements: None is required
- f. Admission requirements (see also Curriculum Comparison)

An applicant for the master's program in engineering management should have a bachelor's degree from an ABET-accredited engineering program, though applicants with bachelor's degrees in physical sciences, computer science or mathematics will also be considered. Applicants who have an undergraduate GPA of less than 3.0 on a 4.0 scale may be asked to submit two letters of recommendation, a résumé, a statement of objectives and GRE results. All students are required to have a combined verbal/quantitative GRE score of 300 or higher (using the 130-170 point per part scoring system).

International applicants for whom English is not their primary language must submit internet-based TOEFL scores of 79 or higher in addition to the GPA requirement.

General admission requirements and the process for applying are presented in the Academic Overview section.

g. Educational justification for the dual operation of programs broadly similar to unique or high-demand programs at HBIs (Historically Black Institutions).

MSEM programs are not offered at Maryland HBIs including Morgan State University, Coppin State University, Bowie State University, and University of Maryland Eastern Shore.





Education Partnership Agreement Between Naval Air Warfare Center Aircraft Division

And

Florida Institute of Technology

I. PREAMBLE

In accordance with the goals and objectives of Title 10 United States Code (U.S.C.) §2194, Education Partnerships, the Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV) located at Patuxent River, MD Lakehurst, NJ and Orlando, FL wish to enter into an education partnership agreement with Florida Institute of Technology. NAVAIRWARCENACDIV and Florida Institute of Technology (FIT) (collectively "the Partners") enter into this Agreement in recognition of the vital role that workforce-relevant advanced education in Business and Management Studies and Science, Technology, Engineering and Mathematics (STEM) disciplines play in the United States' current and future viability.

II. BACKGROUND

Congress enacted Public Law 101-510 (5 November 1990), Title 10 U.S.C. §2194, Education Partnerships, for the purpose of encouraging and enhancing study in scientific disciplines at all levels of education. Title 10 U.S.C. §2194, Education Partnerships, requires the Secretary of Defense authorize each defense laboratory to enter into one or more Education Partnership Agreements with educational institutions in the United States, including local educational agencies, colleges, universities and nonprofit institutions that are dedicated to improving science, mathematics and engineering education.

III. AUTHORITY

This Agreement is entered into pursuant to the authority contained in:

- a) Title 10 U.S.C. §2194, Education Partnership Agreements
- b) Title 5 U.S.C §4103, Establishment of Training Programs
- c) Director of Defense Research and Engineering (DDR&E) memorandum entitled, "Interim Guidance on the use of certain Authorities Granted Under: 10 U.S.C §2194, "Education Partnerships"
- d) Letter, NAVAIR to NAWC, Authority to Establish Education Partnership Agreements letter, Ser AIR-00/006, dated Sep 21, 1998
- e) Office of Civilian Personnel Management Instruction 12720.1, Equal Employment Opportunity and Affirmative Employment Programs, dated 26 Feb 1991

IV. PURPOSE

The purpose of this Agreement is to encourage and enhance the study of Business, Management, Acquisition & Contracts, Logistics, and STEM related careers. This Agreement will allow the Partners to mutually aid in the educational experience of FIT business, management, acquisition, logistics, flight test, engineering, science students and faculty by providing a mechanism by which those students and faculty can benefit from the expertise, unique facilities and equipment related to the Partners.

V. INITIATIVES & BENEFITS

The Partnership will allow for the development of collaborative research efforts between the Partners on technology and topics of interest related to aviation, promotion of STEM related careers, possible internship opportunities and facilitation of the education of future scientists and engineers. Students and faculty will have access to state of the art research development, test and development facilities beyond that which would normally be available to Florida Institute of Technology.

VI. ACTIONS

a) Establishment of Coordinators

Coordinators will be assigned by each Partner as needed, to accomplish the specific initiatives defined in this Agreement.

Coordinators will perform the following functions:

- 1. Review and process for approval all initiatives related to this partnership agreement; and
- 2. Meet as needed in order to discuss the progress of projects undertaken through this Agreement; and
- 3. Coordinate and develop joint R&D proposals to other entities (i.e. ONR, DARPA).
- b) NAVAIRWARCENACDIV may loan laboratory equipment to FIT for educational purposes.
- c) NAVAIRWARCENACDIV may make laboratory personnel available to provide career advice, seminars, curriculum, courses or to assist in the development of such courses and related educational material.
- d) NAVAIRWARCENACDIV may involve faculty and students of FIT in laboratory research projects.
- e) NAVAIRWARCENACDIV may offer visits, tours and demonstrations at it facilities for faculty and students of FIT for the educational purposes stated in this Agreement.
- e) FIT may provide feedback to NAVAIRWARCENACDIV on the benefits of NAVAIRWARCENACDIV's contributions to the educational program.
- f) NAVAIRWARCENACDIV may provide FIT students with opportunities for cooperative education and summer employment through existing Navy programs.
- g) NAVAIRWARCENACDIV may provide opportunities for summer work and sabbatical positions for FIT staff and faculty through existing Navy programs.
- h) FIT may provide opportunities for NAVAIRWARCENACDIV to assist in the development of curriculum for FIT.
- FIT may provide opportunities for NAVAIRWARCENACDIV staff to attend FIT and earn advanced degrees and certificates.

VII. INTELLECTUAL PROPERTY

a) Definitions.

"Proprietary Information" – Any information, technical data or knowledge in whatever form, including, but not limited to, documented information, machine readable or interpreted information, information contained in physical components, mask works, and art work, which are clearly identified by the disclosing Partner prior to disclosure, reduced to written summary form, and marked as being proprietary by the transmitting Partner, and transmitted to the recipient within 30 business days after such oral or visual transmission. During this 30 business day period, such oral or visual information so disclosed shall be provided the same protection as provided Proprietary Information as set forth below. Failure to so identify, reduce to writing, mark, and deliver such verbally or visually disclosed information in the manner prescribed shall relieve the receiving Partner of all obligation of protection with respect to said disclosed information thereafter.

b) Information Handling.

- Information Security Each Partner shall provide notice of any special information handling (classified, proprietary, etc.) obligations associated with a project, test articles, technical information, test data, specifications, etc. If no notice is provided, it will be assumed that no restrictions are required.
- If the project or related information is classified, the product or related information will be handled in accordance with the applicable instructions of the DoD Industrial Security manual, for safeguarding such articles or information against unauthorized disclosure and as stipulated herein.
- 3. The Partners to this Agreement who receive Proprietary Information belonging to the other Partner shall hold such Proprietary Information in strict confidence; shall limit its further disclosure to only those personnel having a need for access to the Proprietary Information; shall not disclose such Proprietary Information to any third party; and shall use the Proprietary Information only for performance of this Agreement, The Partners further agree to make a good faith effort to minimize, to the extent practicable, the number of persons having access to Proprietary Information. Proprietary Information shall receive security protection in accordance with the receiving Partners' standard procedures governing the handling of such information and as agreed to in any attachments hereto.
- 4. Upon completion or termination of this Agreement, each Partner shall, at the request of the disclosing Partner, return or properly dispose of all classified, Proprietary Information unless otherwise agreed by the Partners.

c) Data Rights.

1. The term "data" as used in this Agreement includes technical data, detailed manufacturing or process data, form, fit and function data, computer databases, computer programs, computer software, and computer software documentation as defined in the Defense Federal Acquisition Regulation Supplement Clause 252.227-7013 (January 2008). It also included orally communicated information of a scientific or technical nature and information that, if recorded, would be technical data, detailed manufacturing or process data, form, fit and function data, computer databases, computer programs, computer software, and computer software documentation, provided such information is reduced to writing within 30 business days after communication.

- 2. Notwithstanding any provision to the contrary, nothing in this Agreement shall diminish any rights in data, including any preexisting rights in any data that the Government has, or is entitle to, under this or any other Government agreement or contract, or is otherwise entitled to as a matter of law.
- 3. Except where prohibited by law or regulation or otherwise provided in this Agreement, Florida Institute of Technology shall have the right to use and disclose data delivered by NAVAIRWARCENACDIV under this Agreement.
- 4. This provision shall survive the termination, cancellation or suspension of this Agreement.

d) Patent Rights

- 1. The term "invention" as used in this Agreement is defined in Federal Acquisition Regulation Clause 52.227-12 (January 1997).
- 2. Nothing in this Agreement shall grant to or confer upon Florida Institute of Technology any rights, expressed or implied, to any invention owned by the Government or to which the Government is entitled to ownership, including but not limited to, any invention conceived or reduced to practice under this Agreement, or under any patent application or patent owned by the Government or to which the Government is entitled to ownership.
- 3. Florida Institute of Technology shall own all rights, title and interests in any invention conceived or first reduced to practice solely by Florida Institute of Technology personnel or students and grants in advance to the federal government a world-wide, royalty-free, nonexclusive license in favor of the federal government conveying the right to use, duplicate or disclose such works in any manner, and to have or permit others to do the same, for federal government purposes only.
- 4. The Partners agree the Florida Institute of Technology shall each have the right to seed a license, in accordance with Chapter 18 of Title 35 U.S.C. as implemented within the Navy by Secretary of the Navy Instruction 5870.2D, for any invention conceived or first reduced to practice solely by the Government under this Agreement.
- 5. In the event copyrightable works are created under this Agreement, Florida Institute of Technology shall own the copyright in all works created in whole or in part by employees of Florida Institute of Technology, and grants in advance a world-wide, royalty-free, nonexclusive license in favor of the federal government conveying the right to use, duplicate or disclose such works in any manner, and to have or permit others to do the same, for federal government purposes only.

VII. GENERAL PROVISIONS

- a) The level of effort to be expended by NAVAIRWARCENACDIV and Florida Institute of Technology on any activity under this Agreement shall be within the discretion of each partner.
- b) Each Partner will be responsible for its own costs.

c) Prior to its release, all information made available to the media and public concerning Florida Institute of Technology and NAVAIRWARCENACDIV under this Agreement is subject to a public release review by NAVAIRWARCENACDIV Public Affairs Office.
NAVAIRWARCENACDIV shall maintain the confidentiality of all student information shared with it under this Agreement and shall not release information regarding students without first obtaining the permission of Florida Institute of Technology.

VIII. WARRANTIES

- a) NAVAIRWARCENACDIV hereby warrants to Florida Institute of Technology that the performance of the activities specified by this Agreement is consistent with the authority granted in Title 10 U.S.C §2194 and associated guidance and directives as listed in Section III.
- b) Florida Institute of Technology hereby warrants to NAVAIRWARCENACDIV that, as of the date hereof: it is an education institution in the United States, as required by Title 10 U.S.C. §2194; it meets the requirements of Title 26 U.S.C. §501(c) (3); it is dedicated to improving science and mathematics education; and it has the requisite power and authority to enter into this Agreement and to perform according to the terms thereof.

IX. LIABILITIES

- a) NAVAIRWARCENACDIV's responsibility for injury or loss of property or personal injury or death caused by the gross negligence or willful misconduct of any employee of NAVAIRWARCENACDIV while acting within the scope of his office or employment will be in conformance with the Federal Tort Claims Act, NAVAIRWARCENACDIV shall not be liable to Florida Institute of Technology for any claims whatsoever, including loss of revenue or other indirect or consequential damages.
- b) No Partner shall be liable for the consequences of any unforeseeable force majeure event that (1) is beyond its reasonable control, (2) is not caused by the fault or negligence of such Partner, (3) causes such Partner to be unable to perform its obligations under this Agreement, and (4) cannot be overcome by the exercise of due diligence. In the event of the occurrence of a farce majeure event, the Partner unable to perform shall promptly notify the other Partner. It shall further pursue its best efforts to resume as quickly as possible and shall suspend performance only for such period of time as is necessary as a result of the force majeure event.

X. EXPORT CONTROLS

- a) Notwithstanding any other clause in this Agreement, this Agreement does not in any way authorize the export of any defense articles or defense services (including information or technical data) nor does it in any way authorize or approve the use of an exemption to the export licensing requirements of the International Traffic in Arms Regulation (ITAR). If Florida Institute of Technology or NAVAIRWARCENACDIV wishes to export any defense article or service provided under this Agreement or derived from any defense article or service (e.g. know-how), then it must first obtain an export license.
- b) Work on certain NAVAIRWARCENACDIV research projects may involve militarily critical technology or information the export of which is restricted by statute, executive order, or

regulation (including, but not limited to, the Arms Export Control Act, the International Traffic in Arms Regulation, the Export Administration Act). The Party desiring to export shall ensure full compliance with all applicable requirements and restrictions before it makes any disclosure that may be deemed an export of such information. Nothing in this article is intended to waive any requirements imposed by any other U.S. Government agency with respect to disclosure of export controlled information or militarily critical technology to foreign nationals.

XI. SECURITY

- a) This agreement is unclassified.
- b) No access to U.S. Sensitive but Unclassified information is allowed.
- c) No access to Intelligence information is allowed.
- d) No access to "For Official Use Only" (FOUO) or sensitive unclassified information is allowed.
- e) No government-owned Non-NMCI Automated Information System (AIS) are to be used.
- f) No school—owned unclassified AIS are to be brought onto the government site.

XII. KEY PERSONNEL

a) Each Partner designated the individual below as its coordinator unless and until it gives written notice of a change in its coordinator. Notices that are required to be given under this Agreement shall be effective if given in writing and delivered be (a) personal delivery, (b) recognized commercial courier with receipt, (c) facsimile with documentation of transmission or (d) registered mail, postage prepaid and addressed as followed:

NAVAIRWARCENACDIV

Mr. Michael Schroeder
Director
NAWCAD Technology Transfer Office
22347 Cedar Point Road
Bldg. 2185
Patuxent River, MD 20670
301-342-6371
Michael.schroeder@navy.mil

Florida Institute of Technology

Dr. Robert R. Schaller, Sr.
Director and Associate Professor
Florida Institute of Technology, Southern Maryland Sites
21803 A Three Notch Road
Lexington Park, MD 20653
301-862-1004
schaller@fit.edu

XIII. TERMS OF AGREEMENT AND RIGHTS TO TERMINATION

- a) This Agreement shall become effective upon the date of the last signature of the authorized representatives of each of the Partners, and shall remain in effect for five (5) years form it Effective Date, unless otherwise previously terminated or extended in writing.
- b) This Agreement constitutes the entire agreement between the Partners concerning the subject matter hereof and supersedes any prior understanding or written or oral agreement relative to said matter. Any changes to this agreement must be in writing and signed by both parties to be effective.
- c) The illegality or invalidity of any provisions of this Agreement shall no impair, affect, or invalidate the other provisions of this Agreement.
- d) Titles and headings of the sections and subsections of this Agreement are for convenience of reference only and do not form a part of this Agreement and shall in no way affect the interpretation thereof.
- e) The Partners agree that the laws of the United States of America as applied by the Federal Courts shall govern this Agreement for all purposes.
- f) NAVAIRWARCENACDIV and Florida Institute of Technology may elect to terminate this Agreement at any time by mutual consent. In such event, the Partners shall specify the disposition of all activities accomplished or in progress arising from or performed under this Agreement and they shall specify the disposal of all property in a manner consistent with this Agreement and property disposal laws and regulations. Further, either Partner may unilaterally terminate this entire Agreement at any time by giving the other Partner written notice not less than thirty (30) days prior to the desired termination date.
- g) The articles covering Liability, General Provisions and Surviving Provisions shall survive the termination of this Agreement.
- h) This Agreement may be executed in three or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. The Partners agree that signatures exchanged by facsimile or other electronic means are effective for all purposes hereunder to the same extent as original signature.

SIGNATURES

Florida Institute of Technology:

Dr. T. Dwayne McCay

Florida Institute of Technology

President

/\ /\-

(Signature)

NAVAIRWARCENACDIV:

RDML Shane G. Gahagan

Commander

Naval Air Warfare Center Aircraft Division

A-2: Educational Need

M.S. Engineering Management (revised) (incorrect section crossed out)

- (a) What critical and compelling Regional or Statewide (Maryland) need and demand does your proposed program meet?
 - (1) Occupational Need

FIT is proposing the addition of an M.S. in Engineering Management at the SMHEC site. The program is designed for professionals in engineering and related technical fields seeking to enhance their technical expertise and lead dynamic work teams. This degree gives individuals a unique blend of engineering and management expertise, preparing them with the leadership skills they need to oversee complex technical projects. The core competencies of the master's in engineering management include quality and project engineering encompassing need and requirement identification, design and implementation planning and budgets, measurement of objectives and product/process engineering to improve system performance in addition to engineering operations and logistics and team dynamics and productivity.

The objective of the master's in engineering management degree program is to create individuals who are well prepared for executive leadership roles in engineering, technology, management or even running their own companies. Since many graduates are already working professionals, these individuals often find new engineering management jobs through career advancement opportunities within their current organization.

Gary Hinkle, president and founder of Auxilim, wrote an article for SPIE.org (International Society for Optics and Photonics) where he pointed out that "the technical skills that an engineer's job requires are really a small percentage of the competencies that are needed to be successful. Interpersonal competencies, business acumen, and, yes, leadership and management skills are all required in engineering work. As engineers advance in the profession, leadership and management competencies become more important". This sentiment was further expanded as a notable future concern by senior engineering and executive managers in a Deloitte and Touche LLC survey of 1,900 engineers from various engineering societies highlighting the need for "...managers well-versed in the disciplines of both technology and business to remain successful in a world where product innovation is increasingly becoming a matter of multidisciplinary, international, and often multicultural collaboration."

The major tenant command at NAS Patuxent River is Naval Air Warfare Center Aircraft Division (NAWCAD) where thousands of technical and engineering employees address the unique challenges of naval aviation. Many seek advanced degrees in specific engineering fields such as aerospace, mechanical, electrical, and computer engineering. Some seek the M.S. in Engineering Management if there career goal is program management of engineering programs. The FIT program is the only face-to-face program of its kind in Southern Maryland.

Maryland is expecting continued growth in technology industries as a major source of future employment. BioMaryland characterizes the MD 270 corridor while CyberMaryland defines the vast swath around Ft. Meade. The emerging field of autonomy and unmanned systems is a key driver for Southern Maryland as Naval Aviation advances quickly into this area with NAVAIR/NAWCAD serving as the anchor. The region is rapidly evolving into AeroMaryland. Science and technology development is at the heart of this boom.

Department of Defense (DoD) Acquisition Programs in the Washington DC Region could benefit from employees with education and training in Engineering Management. Teams on major acquisition programs are responsible for the planning, budgeting, and execution of development and operational engineering programs. Knowing technical requirements helps ensure test programs are properly scoped in terms of technical requirements, schedule, and budget. The Navy alone employs over 70,000 personnel in the Washington DC Region. FIT expects at least 10 Washington DC Region personnel to enroll in the FIT programs per year.

The M.S. in Engineering Management degree is suitable for individuals from fields other than technology and computing, including business, mathematics, science and engineering, education, health care and government administration. Career paths for individuals who earn this degree vary widely based on this developing field bridging the gap between traditional business and engineering technology role333s. According to the Bureau of Labor Statistics 2014-15 Occupational Outlook Handbook, management roles are anticipated to remain stable at 11% job growth through 2022 while information systems management is predicted to grow 15% faster than average through that same time period.

The primary source of students for this program is the employee population at NAS Patuxent River including civilians, contractors, and military personnel. Additionally, this program has appeal to working professionals in the broader Southern Maryland community in the computing, energy and environmental sciences fields, education, health care, government administration, and related industries.

Maryland is expecting strong employment in professional, scientific, and technical services industries and in technology management occupations through 2022 as shown in the table below. While most of these jobs may not require the M.S. in Engineering Management degree, the need for specialized knowledge required for management of complex technical systems is increasing much faster than all needs in the management labor force.

Industry/Occupational Sector	2012	2022	Change	% Chg
Professional, Scientific, and Technical Services	242,093	284,648	42,555	17.58%
Computer and Information Systems Managers	10,671	12,245	1,574	14.8%

Management Occupations	185,303	196,575	11,272	6.1%

Source: Maryland Department of Labor, Licensing and Regulation, Maryland Occupational Projections 2012 – 2022, Maryland Industry

Projections http://www.dllr.state.md.us/lmi/iandoproj/industry.shtml (updated March 16, 2015)

List of possible career paths for students with a M.S. Engineering Management degree:
CTO (Chief Technology Officer)
Chief Engineer
Management Information Systems Director
Information Systems Manager
Program Manager
Project Manager
IT Project Manager
Senior Engineering Analyst
Engineering Consultant

- (2) Societal Need N/A
- (b) If similar programs exist in the State, what are the similarities or differences in your program in terms of the degrees awarded, the areas of specialization, and the specific academic content of the programs?

There is no similar face-to-face Engineering Management graduate degree program available in Southern Maryland. Both Johns Hopkins University and George Washington University formerly offered similar Systems Engineering Management programs at SMHEC but converted these to online delivery.

(c) Is a Maryland employer sponsoring/supporting the application for the program to be offered at this location? **No**

A-2: Educational Need

M.S. Engineering Management (revised) (incorrect section deleted)

(c) What critical and compelling Regional or Statewide (Maryland) need and demand does your proposed program meet?

(3) Occupational Need

FIT is proposing the addition of an M.S. in Engineering Management at the SMHEC site. The program is designed for professionals in engineering and related technical fields seeking to enhance their technical expertise and lead dynamic work teams. This degree gives individuals a unique blend of engineering and management expertise, preparing them with the leadership skills they need to oversee complex technical projects. The core competencies of the master's in engineering management include quality and project engineering encompassing need and requirement identification, design and implementation planning and budgets, measurement of objectives and product/process engineering to improve system performance in addition to engineering operations and logistics and team dynamics and productivity.

The objective of the master's in engineering management degree program is to create individuals who are well prepared for executive leadership roles in engineering, technology, management or even running their own companies. Since many graduates are already working professionals, these individuals often find new engineering management jobs through career advancement opportunities within their current organization.

Gary Hinkle, president and founder of Auxilim, wrote an article for SPIE.org (International Society for Optics and Photonics) where he pointed out that "the technical skills that an engineer's job requires are really a small percentage of the competencies that are needed to be successful. Interpersonal competencies, business acumen, and, yes, leadership and management skills are all required in engineering work. As engineers advance in the profession, leadership and management competencies become more important". This sentiment was further expanded as a notable future concern by senior engineering and executive managers in a Deloitte and Touche LLC survey of 1,900 engineers from various engineering societies highlighting the need for "...managers well-versed in the disciplines of both technology and business to remain successful in a world where product innovation is increasingly becoming a matter of multidisciplinary, international, and often multicultural collaboration."

The major tenant command at NAS Patuxent River is Naval Air Warfare Center Aircraft Division (NAWCAD) where thousands of technical and engineering employees address the unique challenges of naval aviation. Many seek advanced degrees in specific engineering fields such as aerospace, mechanical, electrical, and computer engineering. Some seek the M.S. in Engineering Management if there career goal is program management of engineering programs. The FIT program is the only face-to-face program of its kind in Southern Maryland.

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The M.S. in Engineering Management degree is suitable for individuals from fields other than technology and computing, including business, mathematics, science and engineering, education, health care and government administration. Career paths for individuals who earn this degree vary widely based on this developing field bridging the gap between traditional business and engineering technology role333s. According to the Bureau of Labor Statistics 2014-15 Occupational Outlook Handbook, management roles are anticipated to remain stable at 11% job growth through 2022 while information systems management is predicted to grow 15% faster than average through that same time period.

The primary source of students for this program is the employee population at NAS Patuxent River including civilians, contractors, and military personnel. Additionally, this program has appeal to working professionals in the broader Southern Maryland community in the computing, energy and environmental sciences fields, education, health care, government administration, and related industries.

Maryland is expecting strong employment in professional, scientific, and technical services industries and in technology management occupations through 2022 as shown in the table below. While most of these jobs may not require the M.S. in Engineering Management degree, the need for specialized knowledge required for management of complex technical systems is increasing much faster than all needs in the management labor force.

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Professional, Scientific, and Technical Services	242,093	284,648	42,555	17.58%
Computer and Information Systems				
Managers	10,671	12,245	1,574	14.8%
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Projections http://www.dllr.state.md.us/lmi/iandoproj/industry.shtml (updated March 16, 2015)

List of possible career paths for students with a M.S. Engineering Management degree:
CTO (Chief Technology Officer)
Chief Engineer
Management Information Systems Director
Information Systems Manager
Program Manager
Project Manager
IT Project Manager
Senior Engineering Analyst
Engineering Consultant

- (4) Societal Need N/A
- (d) If similar programs exist in the State, what are the similarities or differences in your program in terms of the degrees awarded, the areas of specialization, and the specific academic content of the programs?

There is no similar face-to-face Engineering Management graduate degree program available in Southern Maryland. Both Johns Hopkins University and George Washington University formerly offered similar Systems Engineering Management programs at SMHEC but converted these to online delivery.

(d) Is a Maryland employer sponsoring/supporting the application for the program to be offered at this location? **No**



Boyd K. Rutherford Lt. Governor

> Anwer Hasan Chairperson

Jennie C. Hunter-Cevera Acting Secretary

August 28, 2015

Dr. Anthony James Catanese President Florida Institute of Technology 150 West University Blvd. Melbourne, FL 32901

Dear President Catanese:

The Maryland Higher Education Commission has received an application from Florida Institute of Technology to renew eight existing programs and two areas of concentration within an approved program at Aberdeen Proving Ground, located at 320 Johnson Street, MD 21005, to renew one program and two areas of concentration within an approved program and offer one new program at the Southern Maryland Higher Education Center, located at 44219 Airport Road, California, MD 20619, and to discontinue all operations at Fort Detrick. I am pleased to inform you that Florida Institute of Technology is authorized to offer the programs listed below at these locations until August 31, 2020.

Approved programs:

Aberdeen Proving Ground (APG)

- I. Master of Business Administration (M.B.A.)
- II. M.S. in Acquisition and Contract Management
- III. M.S. in Engineering Management
- IV. M.S. in Management
- V. M.S. in Human Resource Management
- VI. M.S. in Operations Research
- VII. M.S. in Project Management
 - a. A.O.C. in Information Systems
 - b. A.O.C. in Operations Research
- VIII. M.S. in Systems Management

Southern Maryland Higher Education Center (SMHEC)

- I. Master of Science (M.S.) in Project Management
 - a. A.O.C. in Information Systems
 - b. A.O.C. in Operations Research
- II. Doctor of Business Administration (DBA)

Discontinued program:

Fort Detrick

I. P.B.C. in Project Management

An electronic renewal form and the regulations for out-of-state institutions are available on the Commission's website under "Academic Approval Process" at www.mhec.state.md.us. In order to operate at the approved location after the stated expiration date, the renewal application should be completed and submitted to this office no later than five months before the institution proposes to commence operation for the academic year 2020-2021. If applicable, the use of VA benefits for these programs should be coordinated through Ms. Trish Gordon-McCown, Associate Director -Veterans Affairs. She can be reached at 410-767-3098.

Please keep us informed of any changes contemplated in your offerings in Maryland. We look forward to continuing the cooperative relationship developed between your institution and the Maryland Higher Education Commission.

Sincerely,

Jennie C. Hunter-Cevera, Ph.D.

Acting Secretary of Higher Education

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JCHC:JVF:mrw

C: Dr. Robert Schaller, Site Director, Florida Institute of Technology



Boyd K. Rutherford Lt. Governor

> Anwer Hasan Chairperson

Jennie C. Hunter-Cevera Acting Secretary

August 17, 2015

Dr. Anthony James Catanese President Florida Institute of Technology 150 West University Blvd. Melbourne, FL 32901

Dear President Catanese:

The Maryland Higher Education Commission has received an application from Florida Institute of Technology to renew eleven existing programs and an area of concentration within an approved program and to offer three new programs and a new area of concentration within an approved program at its Patuxent River location. I am pleased to inform you that Florida Institute of Technology is authorized to offer the programs listed below until August 31, 2020.

Approved programs:

- I. Post-Baccalaureate Certificate (P.B.C.) in Acquisition and Contract Management
- II. Bachelor of Science (B.S.) in Logistics Management (2+2 with College of Southern Maryland)
- III. Master of Science (M.S.) in Logistics Management
- IV. Master of Business Administration (M.B.A.)
- V. Master of Science (M.S.) in Aerospace Engineering
- VI. Master of Science (M.S.) in Computer Information Systems
- VII. Master of Science (M.S.) in Computer Science
- VIII. Master of Science (M.S.) in Acquisition and Contract Management
 - IX. Master of Science (M.S.) in Electrical Engineering
 - X. Master of Science (M.S.) in Engineering Management
 - XI. Master of Science (M.S.) in Management
 - a. A.O.C. in Logistics Management
- XII. Master of Science (M.S.) in Mechanical Engineering
- XIII. Master of Science (M.S.) in Project Management
 - a. A.O.C.s in Information Systems and Operations Research
- XIV. Master of Public Administration (M.P.A.)

An electronic renewal form and the regulations for out-of-state institutions are available on the Commission's website under "Academic Approval Process" at www.mhec.state.md.us. In order to operate at the approved location after the stated expiration date, the renewal application should be completed and submitted to this office no later than five months before the institution proposes to commence operation for the academic year 2020-2021. If applicable, the use of VA

benefits for these programs should be coordinated through Ms. Trish Gordon-McCown, Associate Director -Veterans Affairs. She can be reached at 410-767-3098.

Please keep us informed of any changes contemplated in your offerings in Maryland. We look forward to continuing the cooperative relationship developed between your institution and the Maryland Higher Education Commission.

Sincerely,

Jennie C. Hunter-Cevera, Ph.D. Acting Secretary of Higher Education

JCHC:JVF:mrw

C: Dr. Robert Schaller, Site Director, Florida Institute of Technology

Boyd K. Rutherford Lt. Governor

> Anwer Hasan Chairperson

James D. Fielder, Jr., Ph. D. Secretary

November 30, 2017

Dr. Anthony James Catanese President Florida Institute of Technology 150 West University Blvd. Melbourne, FL 32901

Dear President Catanese:

The Maryland Higher Education Commission (the "Commission") previously granted approval to Florida Institution of Technology (FIT) to operate and offer 16 programs at the Naval Air Station (NAS) Patuxent River under extended approval through August 31, 2020. FIT had a long-standing memorandum of understanding with NAS Patuxent River to offer these programs. The Commission understands that the agreement was terminated by NAS. FIT is currently in the process of transferring classroom instruction to the Southern Maryland Higher Education Center (SMHEC). The Commission had also previously granted approval to FIT to offer 6 programs at SMHEC under extended approval through August 31, 2020. FIT also maintains an office at SMHEC.

In order to ensure a smooth transition for students as FIT moves to offering all programs at SMHEC, the Commission is granting Florida Institute of Technology (FIT) conditional approval to continue and expand operations at SMHEC, located at 44219 Airport Rd, California, MD 20619. FIT's conditional approval will expire on June 15, 2018. Conditional operations at SMHEC exclude any new programs not submitted to this Commission for review.

The Commission is also granting conditional approval to offer the programs listed below at SMHEC. The following 13 programs and 3 areas of concentration were previously approved for the NAS Patuxent River location and are in need of approval to be offered at SMHEC. The Commission understands that SMHEC must first approve the programs and then the Commission will review the proposed programs.

Program Name	Previously	Currently	Needs Approval
	Approved for	Approved for	to be offered at
· v	NAS Patuxent	SMHEC	SMHEC
Post-Baccalaureate Certificate (P.B.C.) in			X
Acquisition and Contract Management			
Post-Baccalaureate Certificate (P.B.C.) in Flight Test			х
Engineering		21	
Master of Science (M.S.) in Flight Test Engineering			х
Master of Business Administration (M.B.A.)			X
Master of Science (M.S.) in Aerospace Engineering			X

Master of Science (M.S.) in Computer Information	Х
Systems	v
Master of Science (M.S.) in Computer Science	X
Master of Science (M.S.) in Acquisition and	X
Contract Management	
Master of Science (M.S.) in Electrical Engineering	X
Master of Science (M.S.) in Engineering	X
Management	
Master of Science (M.S.) in Mechanical Engineering	X
Master of Public Administration (M.P.A.)	X
Master of Science (M.S.) in Management	X
A.O.C. in Acquisition/Contracts	X
A.O.C. in Human Resources	X
A.O.C. in Information Systems	X

Both conditional approvals are contingent upon compliance with Code of Maryland Regulations (COMAR) 13B.02.01.02(C) and 13B.02.01.08(I)(1) as well as SMHEC's endorsement for the programs listed above. Florida Institute of Technology must submit to the Commission official notice of SMHEC's final decision no later than 10 calendar days from the date of SMHEC's written notification. A proposal as required under COMAR 13B.02.01.08I(1) and 13B.02.01.06 to offer all programs at SMHEC is due to the Commission no later than 30 days of the SMHEC Governing Board's approval.

We appreciate your attention to this matter. Should you have any questions, please do not hesitate to contact Karen King-Sheridan, Associate Director of Collegiate Affairs.

Sincerely,

Dr. James D. Fielder

D. Lulden

Secretary

JDF:EAAD:MK:kks

C: Dr. Mary Bonhomme, Associate Provost, Department of Extended Studies, FIT

Dr. Robert Schaller, Director and Associate Professor, Patuxent and SMHEC Sites, FIT

Dr. Emily A. A. Dow, Assistant Secretary, MHEC

Dr. Michael Kiphart, Director, Academic Affairs, MHEC

Trish Gordon-McCown, Associate Director of Veterans Affairs, MHEC

Karen King-Sheridan, Associate Director of Collegiate Affairs, MHEC