



# Building Leaders Who Deliver Strategic Technology-Based Innovative Solutions

Master of Science in Engineering Management: Professional  
Project and Systems Engineering Cohort Program

COLLEGE OF ENGINEERING AND COMPUTER SCIENCE



# **The Importance of Technology-Based Innovation**

Today's worldly and business challenges require innovative solutions. Technology-based solutions will continue to be a driver for fundamental performance changes. We need leaders who deliver these innovative solutions.

## **UCF's MSEM, Professional Project and Systems Engineering Offering**

The MSEM Professional Project and Systems Engineering offering is a cohort-based program where specific cohorts are established based on the needs of industry. The program is designed as lock-step and to be completed in under 2 years. This program will enable you to deliver and manage complex systems, improve on-the-job performance, and to maximize your organization's success. You will integrate project delivery processes through leadership, new product development, systems engineering, and project management. Relevant and connected course materials are taught at the intersection of engineering and management. Since 2009, the Professional Project and Systems Engineering program has graduated working professionals from leading employers in the Orlando region such as Harris, Kennedy Space Center, Kratos, Lockheed Martin, Raytheon, Siemens, and Walt Disney World. Over 75% of our alumni have reported career advancement after participating in the program.

The Professional Project and Systems Engineering offering focuses on working professionals who want to strengthen their management skills and is suitable for:

Managers at all levels	Scientists in other fields
Engineers	Business executives
Computer scientists	High performers

## **A Learning Environment Designed for the Working Professional**

To support working professionals, we have designed the program with the following characteristics:

- Senior faculty who have made significant contributions to the success of project-based technical organizations

- Industrial scholars (senior level working professionals) participate in the courses to offer their perspectives to the discussions

- Course work with real world applications for the working professional

- Complete the program in 2 years or less

- Class sessions meet every two weeks for 8 hours

- Convenient location close to your home or workplace

- Online course presentations and assignments accessible anytime, anywhere

- Opportunities to participate in social events of the campus life

- Strong peer support

## What You Will Learn

You will learn how to drive innovation by organizing scarce resources, work in under market-driven tight deadlines, and increase team performances.

Lead a project team through change efforts

Overcome the challenges of a project-based organization

Navigate the processes to deliver a strategically important project

Conduct business analytics to make decisions

Design and develop new products

Make trade-offs in the systems engineering process

Define and manage requirements

Communicate with project stakeholders

Manage the life-cycle cost of a project

Connect the entire process together

Develop new creative ideas

## Class Sequence

The courses include:

### **Technology Strategy**

The challenge and core process for delivering projects

### **Innovation in**

#### **Engineering Design**

Design and develop new products

### **Engineering Statistics**

Conduct business analytics to make decisions

### **Decision Analysis**

Make trades in the systems engineering process

### **Systems Engineering**

Define and manage requirements and risks

### **Systems Architecture**

Define the system concept

### **Advanced Engineering**

#### **Economic Analysis**

Manage the life-cycle cost of a project and product

### **Project Engineering**

Project manage the effort

### **Environment of**

#### **Technical Organizations**

Lead the project team

### **Engineering Management**

Close the loop with the strategy process

### **Capstone**

Apply what you have learned in your work setting



## How do I apply?

Admissions criteria can be found by visiting the UCF Graduate Catalog. Enrollment is limited to 30 students. Personal interviews may also be required to support your application.

### **Contact**

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**Master of Science in Engineering Management**  
Professional Project and Systems Engineering Track

College of Engineering and Computer Science