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Overview

This document addresses common questions about the UCF Master's of Science in Engineering Management (MSEM) and the Professional Engineering Management offering. The major questions answered include:

- What is the MSEM degree?
- What are the two offerings of the MSEM (on campus and cohort-based)?
- How does the PEM track compare to the on-campus program?
- How can I find out more information?

Specific questions about the Professional Engineering Management (PEM) track are also answered:

- What is the focus of the PEM track?
- What is the PEM track?
- How is the PEM track delivered?
- What is the PEM track admission process?
- What are the PEM track logistics?
- What does the PEM track cost?

Note: Please check the UCF graduate catalogue (http://www.graduatecatalog.ucf.edu/) for the most up-to-date and official information. This document is meant to provide general information to common questions. The graduate catalogue provides the official information. For the program brochure and additional overview information please see the program's website (http://www.cecs.ucf.edu/eli2/about-us/)

What is the MSEM degree?

The MSEM degree in Industrial Engineering focuses on effective decision-making in engineering and technological organizations. As an effective project manager, you organize scarce resources, work under tight deadlines, control project changes and generate maximum team performance. You will learn how to successfully plan, manage and deliver projects. You will learn to:

- Strategically align a solution,
- Creates business cases,
- Generate creative solutions,
- Make trade space decisions based upon systems engineering and cost, risk, and decision analysis,
- Model and evaluate systems,
- Manage projects, and
- Lead.

What are the two offerings of the MSEM (on campus and cohort-based)?

The PEM is an offering within the MSEM within the Department of Industrial and Management Systems at the University of Central Florida (UCF).   The MSEM degree is offered 1) on-campus/distance education in the traditional manner and 2) as a cohort-based manner targeted for working professionals. The cohort-based program targeted for working professionals is the PEM.

How does the PEM track compare to the on-campus program?

The PEM is track within the Master's of Science in Engineering Management (MSEM) offered by UCF. The MSEM degree is offered 1) on-campus/distance education in the traditional manner and 2) as a cohort-based manner targeted for working professionals. The cohort-based program targeted for working professionals is the PEM. A comparison of the program is offered in the table below.

	Traditional On-Campus	Professional Engineering Management
Degree	• MSEM	• MSEM
Target Audience	• Any student with an undergraduate degree	• Working professional with an undergraduate degree and 5+ years of experience
Faculty	• Faculty	• Faculty • Professors of Practice • Industrial scholars (senior level working professionals and leaders) participate in course to offer their perspective to the discussions
Focus of Courses	• Content knowledge	• Course work is designed with real–world applications for the working professional
Completion Time	• Up to the student and course schedule	• The program is completed in ~24 months
Scheduled Meeting Time	• Course dependent • Mostly at night	• Class sessions meet every two weeks for 8 hours • Online course presentations and assignments accessible anytime
Location	• Main campus	• Rosen College of Hospitality Management regional campus • There are NO parking issues • This is a convenient location where traffic and congestion are not an issue
Logistical Support	• Student provides on own	• Complete service provided • All books and materials brought to student • Students automatically scheduled for courses • Coffee/beverages offered all day long • Lunch provided on location
Computer	• Student provides on own	• A tablet/laptop computer is provided to the student
On-line Material	• Course Dependent	• Structured, common structure to on-line material including videos, notes, articles
Cost	• Normal tuition rates	• The cost of the program is ~$30,000. • This cost covers all materials (e.g., books, articles, lunches, laptop computers, and industrial scholars).

How can I find out more information?

Please check the UCF graduate catalogue (http://www.graduatecatalog.ucf.edu/) for the most up-to-date and official information. This document is meant to provide general information to common questions. The graduate catalogue provides the official information.

For additional information about the IEMS graduate programs please contact:

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For additional information about the PEM offering please contact:

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What is the PEM track?

The PEM track is offered as a cohort-based program to working professionals. We have built and refined the model based on over 20 years of offering off-campus programs to working professionals. The program is being offered in a **learning environment designed for the working professional:**

- Senior faculty/professors of practice who have made significant contributions to the success of project-based technical organizations teach the courses,
- Industrial scholars (senior level working professionals and leaders) participate in courses to offer their perspective to the discussions,
- Course work is designed with real–world applications for the working professional,
- The program is completed in ~24 months,
- Class sessions meet every two weeks for 8 hours, and
- Online course presentations, videos, and assignments accessible anytime.

PEM will teach you the skills to improve your on-the-job performance and maximize your organization's ability to succeed. As an effective project manager, you organize scarce resources, work under tight deadlines, control project changes and generate maximum team performance. You will learn how to successfully plan, manage and deliver projects. You learn to:

- Strategically align a solution,
- Creates business cases,
- Generate creative solutions,
- Make trade decisions,
- Model and evaluate systems,
- Manage Projects, and
- Lead.

A description of the typical set of courses is provided in the table on the next page.

A description of the typical set of courses for a cohort:

Course	Overall Objective
EIN 6326 Technology Strategy	Increase the student's ability to start a project with the business need at the forefront of the planning process.
EIN 6370 Innovation in Engineering Design	Increase the student's ability to design a user-centered product/service system by developing creative ideas and prototypes.
ESI 5219 Engineering Statistics	Increase the student's ability to use data and statistics to make sound, informed business decisions.
ESI 6358 Decision Analysis	Increase the student's ability to make rational decisions while evaluating trade space options (i.e., make decisions within the trade study process).
ESI 6551 Systems Engineering	Increase the student's ability to define a product to meet requirements.
ESI 6552 Systems Architecture	Increase the student's ability to model the system, requirements, structure, and behavior.
EIN 6357 Advanced Engineering Economic Analysis	Increase the student's ability to deliver a project within cost expectations and to make decisions within the corporate financial perspective.
ESI 6511 Systems Integration & Testing	Increase the student's ability to integrate, test, and evaluate the system and its elements.
EIN 5140 Project Engineering	Increase the student's ability to deliver a project and have a successful project (meet commitments and expectations for a project).
EIN 5108 The Environment of Technical Organizations	Increase the student's ability to navigate the core processes of and overcome the typical challenges of a project-based organization.
EIN 6182 Engineering Management	Increase the student's ability to strategically manage an engineering organization.
EIN 6950 Industrial and Systems Engineering Capstone	Increase the student's ability to effectively integrate and utilize all of the methods, processes, and tools taught during the program by conducting a culminating design experience.

What is the focus of the PEM track?

Specific Question	Response
1) What is the full curriculum for this degree?	• The curriculum focuses on project/solution delivery. The program provides a sequenced set of courses to help identify a solution from strategic need through project management. A set of frameworks, processes, models, and tools are provided for the student use immediately in the workplace.
2) What is the degree?	• Master's of Science in Engineering Management.
3) Is there any need for an advisor for each student?	• There is not a need for a special advisor. • UCF has a team to ensure the cohort and individual student is supported. o Tim Kotnour (PhD) is the program director and is available for meetings, phone calls, and emails to ensure the student gets the support he/she needs. o A project manager to handle daily customer relationship concerns. o Mansooreh Mollaghasemi (PhD) is the department's Graduate Coordinator who administers the graduate admission process. o The Regional Campus office within UCF provides support to program logistics.

How is the PEM track delivered?

Specific Question	Response
4) How long does the program take to complete?	• The program will take approximately 24 months.
5) Is this a structured program where you need to go through the program with the same group of people?	• Yes, the program is structured, and you will be going through it as a cohort. • The curriculum has been defined to work through a specific sequence. • The sequence parallels the gate review process used by many project-based organizations. • Each course provides the content to support a program-long project. Each course adds another piece to the project. The project and courses parallel the stage-gate approach used by many organizations.
6) If we are taking some of these classes now at UCF, can we sign up and complete the degree within the cohort?	• No • Classes are not transferred in. Each course provides the content to support a program-long project. Each course adds another piece to the project. The project and courses parallel the stage-gate approach used by many organizations.
7) Can I take only one class at a time?	• You will part of a cohort-based program. • You will be taking 1 course at a time in a condensed manner for 8– 6 weeks. • You will be taking two courses per semester.
8) Would this program allow someone to work at their own pace?	• No, the program is structured to follow a specific sequence and pace. • This structure and pace have been refined from past cohorts and allows for normal semester breaks.
9) How many professors would be teaching each class?	• One professor per course. • In addition to the primary professor, courses have industrial scholars (working professionals) who share their perspectives and lessons learned.
10) Where will the classes be held?	• Classes are held in a professional setting at a Regional Campus. • It will NOT be offered on UCF's campus. • For example, for the Orlando-based cohorts we offer the classes at the Rosen School for Hospitality Management campus. This facility offers a professional office complex setting. • There are NO parking issues. • This is a convenient location where traffic and congestion are not an issue. • The advantage of this location is the convenience and the ability to focus on the learning without the distractions of the workplace. Feedback from past professionals in the program have consistently recommended the use of an offsite, professional setting.
11) Can the classes be taken virtually?	• The program uses a combined delivery mode: virtual and live application sessions. • Attendance at the live-application sessions is mandatory. • The live-application sessions are conducted every other Friday for 8 hours. • In between the application sessions, the virtual part of the course is offered with video lectures and readings. • This model was developed to support the working professional.

What is the PEM track admission process?

Specific Question	Response
12) What are the prerequisites for the program?	• 3.0 undergraduate GPA (if you have a GPA lower than 3.0 please talk with Dr. Kotnour). • Other prerequisites, as needed by specific courses. • For any gaps in these, please talk with Dr. Kotnour.
13) What is the GRE requirement of this program?	• GRE is NOT required.
14) Can any credits transfer from another masters program? If so, how many?	• Credits cannot be transferred. • The curriculum has been defined to work through a specific sequence. • The sequence parallels the gate review process used by many project-based organizations. • Each course provides the content to support a program-long project. Each course adds another piece to the project. The project and courses parallel the stage-gate approach used by many organizations.
15) Does the program require an undergraduate degree in engineering?	• No. • We have had non-engineers successfully participate in the program.

What are the PEM track logistics?

Specific Question	Response
16) When would the semester start for the new program?	• The program is offered on a periodic basis based on market demand.
17) Would the semesters follow the UCF normal schedule?	• The program would follow the normal UCF schedule for a semester. • Each course is offered over a 8 - 6 week period. • Students take 1 course a time. • Maximum of Two courses are completed per semester.
18) What are the start and stop times for class?	• The proposed start time is 9:00. • The proposed stop time is 5:00. The end times may be a bit earlier for some of the sessions. Lunch is provided during the working sessions. • The intent of the times is to maintain a work-school-life balance.
19) What day of the week are classes held?	• The classes would be every other Friday.
20) Where do we pick up books for class?	• All materials (e.g., books, articles, laptop computers, and graduation gowns) are brought to the students. • The students will NOT need to go to campus.

What does the PEM track cost?

Specific Question	Response
21) What is the per credit hour fee?	• The cost of the program is ~$30,000. • This cost covers all materials (e.g., books, articles, lunches, and industrial scholars).
22) Do we pay for the courses up front or after graduation?	• You have to pay for each course upfront. • The intent is to work the process to support using tuition reimbursement from the current course to pay for the next course.