ENGINEERING MANAGEMENT PROGRAM
GRADUATE STUDENT HANDBOOK
2023/2024

Contents

General College Guidelines

1. Assistantships

1.1. Teaching Assistantships

1.1.1. Responsibilities and Academic Requirements

The main responsibility of Teaching Assistants is to assist the primary instructor of the course. Activities may include: holding office hours, grading papers or exams, conducting lab sessions, assisting in studio courses and providing supplemental instruction. Standard half-time Teaching Assistants are expected to work 16-20 hours per week during the term of appointment. Quarter-time Teaching Assistants are expected to work 8-10 hours per week. In order to be eligible for a Teaching Assistantship, graduate students need to be enrolled in at least 6 credit hours during the long semester or 3 credit hours during the summer semesters. In addition, TAs need to be in good academic standing with a GPA of at least 3.0.

Examples of main responsibilities	• hold office hours • grade papers or exams • conduct or assist with lab sessions • assist in studio courses • provide supplemental instruction
Standard half-time TA work expectations during appointed term	16-20 hrs/week
Quarter-time TA work expectations during appointed term	8-10 hrs/week
SCH enrollment requirement	• at least 6 credit hours during the long semester (Fall or Spring) • 3 credit hours during the summer semesters
GPA requirement	good academic standing with a GPA of at least 3.0

1.1.2. Appointment Process

Graduate Students may apply for Teaching Assistantships by filling out the forms available from the Department Secretary. Students should make sure to include their resume with their application. A new application needs to be submitted each semester.

1.1.3. Assessment

Each semester Teaching Assistants will be evaluated by their supervising faculty member.

1.1.4. Compensation

Half-time Teaching Assistants are paid a rate of $3,000 per semester and are given in-state tuition waivers. Half-time Teaching Assistants are also eligible to enroll in the university's group medical insurance program. Quarter-time Teaching Assistants are paid a rate of $1,500 per semester and are not eligible for in-state tuition waivers or enrollment in the university's group medical insurance program.

1.2. Research Assistantships

1.2.1. Responsibilities

The primary responsibility of Research Assistants is to assist a faculty member in the conduct of their research. Eligibility requirements are the same as those for teaching assistants.

1.2.2. Appointment Process

Research Assistants are funded through the sponsoring faculty member's grants. These may be internal grants provided by the college or external grants provided by other agencies. The application process for RA's is similar to that of TA's except that the process often starts with a conversation between the student and faculty member. The application is available from the Department Secretary and online at https://www.uhcl.edu/science-engineering/documents/cse-ra-application.pdf.

1.2.3. Assessment

Research Assistants are evaluated by the sponsoring faculty member each semester.

1.2.4. Compensation

Research Assistants are paid a rate of $3,000 per semester and are given in-state tuition waiver. Research Assistants are also eligible to enroll in the university's group medical insurance program.

2. Candidate Plan of Studies and working with your Faculty Advisor

2.1. Purpose of CPS

The purpose of the Candidate Plan of Study (CPS) is to track each student's progress towards degree completion. It spells out the specific requirements needed to complete the degree and can only be changed by the mutual consent of both the student and

faculty advisor. The official CPS is kept in the CSE Dean's office but students are encouraged to keep their own copy. The process of creating a CPS typically starts a few months after a student arrives on campus. The CPS is created by the Academic Advising Office, and the student is notified to contact their faculty advisor. During a meeting between the student and their faculty advisor, which classes the student will take, and whether the Capstone or Thesis option is chosen will be determined. The CPS will then be filled out and signed by both parties, and the faculty advisor will send the CPS draft back to Academic Advising to be finalized.

2.2. Scheduling Appointments with Your Faculty Advisor

Every graduate student is assigned a faculty advisor when they are admitted to the program. The name of the faculty advisor, along with their email address, is listed on each student's admission letter. Students are responsible for arranging initial appointments with their faculty advisor. Students can talk to any full-time faculty member about any issues that they are experiencing within the program but their faculty advisor will be their main point of contact with respect to their degree progress. If a student finds it difficult to work with a specific faculty advisor, they can change advisors by filling out a request form in the Dean's office.

2.3. Questions to Ask Your Faculty Advisor

During your first meeting with your faculty advisor, you may want to discuss issues such as: long-term career goals, areas of research interest, preparation for Doctoral programs or the work-force, time constraints in completing the degree, financial constraints, any issues making attendance difficult, disability status, etc. You are not obligated to work on a research project or thesis with your faculty advisor.

The most important decision in the CPS process is whether you will choose the Master's Thesis option, or the Capstone Option with extended coursework. The decision should be based on your long-term goals including plans for pursuing a PhD and your interest in and aptitude for research. Your advisor will assist you in making that decision.

3. Research Opportunities

3.1. Purpose of Research at UHCL

As UHCL is considered a Teaching University, the primary purpose of research is for the educational enhancement of our students. As such, faculty see student involvement in research as a learning opportunity and should be encouraging and supportive. Any results such as the publishing of articles or the awarding of grants is considered secondary to student learning outcomes.

3.2. On-Campus vs Off-Campus Research

Because of our proximity to NASA, and various industries such as aerospace, high-tech, oil and gas, there are often opportunities for students to pursue research off-campus. For the purposes of thesis and non-thesis work this is not distinguished from on-campus research. Students should however make sure their Faculty Advisor and the Program Chair are aware of any research they are involved in that does not involve a full-time UHCL faculty member.

3.3. Finding Research Opportunities

Research opportunities are often passed on by UHCL Faculty Members, members of the CSE Advisory Board, the UHCL Career Services office and sometimes by student organizations. If a student is interested in off-campus research opportunities, they should let their faculty advisor and their Program Chair know.

4. Dispute Resolution

4.1. Informal Resolution with Instructor

In the interest of the program, we take dispute resolution very seriously. Whenever possible, it is preferable that students resolve any issues related to coursework with the instructor directly. This is best done during the faculty member's office hours or before/after class when the discussion can be done privately. It is advisable that after such a conversation, either the student or faculty member follows up with a clarifying email as to what was discussed and what resolution, if any, was reached.

4.2. Escalating Issues to the Chair

If a student is unsuccessful in resolving an issue with the instructor, the next step is to escalate that dispute to the Program Chair. The student should arrange to meet with the Program Chair or send him or her an email stating the issue. UHCL has a strict no-retaliation policy so students should never worry about reporting an issue with a faculty member. Issues brought up to other faculty members, such as faculty advisors, will be sent to the Program Chair for resolution as if the student reported them directly to the Program Chair. The Chair's duty is then to investigate the issue, listen to all sides and develop a resolution. If the Program Chair cannot resolve the issue, he or she may go to the Department Chair or other members of the College Administration for assistance.

4.3. Escalating Issues to Dean/Associate Dean

Beyond the Program, issues must be written in order to be considered by the Dean/Associate Dean. This may take the form of an email and the student is again protected by a no-retaliation policy. Before sending a complaint to the Department Chair, Associate Dean or Dean, please be sure to try working within the Program to solve the issue first.

4.4. Escalating Issues beyond the CSE Dean's Office

In extreme cases, issues may need to be escalated to the Provost or President. In these situations, the issue must be in writing and the Program/College should have had the opportunity to address the issue. In cases where the upper administration receives a student complaint, they rarely investigate it if the college was unaware of the complaint. Normal policy requires sending the complaint to the program, department or college where it originated and not reviewing the issue until it has been investigated at those levels. If the student is unsure of the process or options available to them, they can always contact the Dean of Students for guidance.

5. Co-ops and Internships

5.1. Finding an Internship or Co-op

UHCL has made a conscious decision to centralize all internship information into one office, the Office of Strategic Partnerships. This office maintains a database of all internship information and vets each company before they can hire UHCL students as interns. This makes it straight-forward for students to identify potential internships and know they are with reputable organizations.

5.2. Application Process

Once a student identifies an internship, they will need to get an offer letter from the organization and fill out the appropriate UHCL internship documentation. The Office of Strategic Partnerships is available to help with the process. In addition, students need to meet basic GPA and residency requirements in order to qualify. The application process generally takes a few weeks so students should be sure to start early.

5.3. Assessment of Experience

Each internship should have a UHCL faculty member as instructor of record as well as a supervisor on the internship. Both the student and supervisor will need to fill out a survey of the experience in order to assess the student and the internship site. Some programs also require that students complete an oral and/or written report after returning from their internship. If there is a problem at any time during the internship,

the student should let the faculty instructor of record know immediately. In addition, if the internship is outside of the United States, it should be registered with the study abroad program.

6. Independent Studies

6.1. Purpose of Independent Studies

Independent studies are often used in emergency situations or whenever teaching a regular course is impractical. Independent study courses should have a syllabus, assessments and learning objectives like traditional courses. UHCL faculty are working to ensure that we teach as few independent study courses as possible although we will teach them as necessary. These courses may be 1 or 2 or 3 credit hours, depending on the purpose of offering the independent study.

6.2. What Can and Can't be Used for Independent Studies

In some situations, a student may need a course to graduate but that course will not be offered in its regular rotation for several semesters. In that situation, an independent study may be used. Independent studies may also be used if a regularly scheduled course does not make due to low enrollment. Independent studies are not meant to be used for research experiences or for elective courses. They are also not meant to be used for courses which would be offered under normal rotation during the next semester.

6.3. Application Process

All Independent Study courses must be approved by the faculty member teaching them, the Program Chair, Department Chair and Associate Dean of the College. This process starts with filling out an independent study form with the instructor and the instructor providing some justification of the independent study to the Program Chair.

7. Other Issues

7.1. Sexual Misconduct

This is one of the most necessary topics in any university manual. Sexual Misconduct is defined as unwelcome sexual advances, requests for sexual favors and other verbal or physical conduct of a sexual nature. Every university has a specific policy on dealing with sexual misconduct, which should outline the rights and process for every party involved in a sexual misconduct dispute. Graduate students should be aware of this policy because 1) as students, they could be the victim of sexual misconduct 2) as teaching assistants, they could be accused of sexual misconduct. Sexual misconduct is not limited to male-female interactions or even interactions between teachers and

students. In order to avoid false allegations, it is recommended that teachers should never have closed-door private meetings with students and should not have official course related meeting off-campus. Be sure to familiarize yourself with the university's policies concerning sexual misconduct. https://www.uhcl.edu/policies/title-ix/

7.2. Campus Services outside of the Program

Beyond your academic Program, UHCL offers a wealth of services that are designed specifically to help students become as successful as possible. Whether you need help with your writing or to prepare for a job interview, please be sure to look towards these resources. Most are found in the Division of Student Affairs at https://www.uhcl.edu/student-affairs/.

Engineering Management Program Specific Items

8. Degree Plans

8.1. Staying on Schedule

Students are ultimately responsible for monitoring their progress towards degree. Faculty are often only aware that a student is behind schedule in extreme cases. While full-time students typically graduate in 1.5-2 years, part-time students can take over 2 years. Students should be careful to monitor their time to degree as classes effectively expire after 5 years and then require administrative approval to count towards the degree. EMGT courses are not sequential, therefore students have more flexibility in when they can take which course. However, students are strongly encouraged to contact their faculty advisor if they deviate from their CPS.

8.2. Standard MS Degree

The Standard Engineering Management Degree consists of 33 total credit hours. This includes 15 credit hours of core courses (3 hours each). Students electing the capstone option need to take five core courses (15 hours), five electives (15 hours) and the capstone course (3 hours). Students electing the thesis option need to take five core courses (15 hours), four electives (12 hours) and at least six credit hours of research and thesis.

9. Certificates

9.1. Certificates for Degree-Seeking Students

The degree-seeking graduate students in the Engineering Management program can obtain one or more of the following three certificates based on their choice of core and elective courses while pursuing their degree program.

- Students should have a grade of at least **B** or above for each course required.
- **No** transferred course will be counted toward any of these certificates.
- Students can claim the certificates when they complete the required courses without waiting for actual completion of the MS degree program.

Certificate	Core Courses	Elective Courses
Joint Certificate on Project Management and Six Sigma Green Belt (PMSS)	• EMGT 5231 Engineering Management Planning • EMGT 5430 Professional Project Management	• EMGT 5230 Negotiation Strategies • EMGT 5331 Six Sigma Quality
SAP Student Recognition Award (SRA)		• EMGT 5632 Logistics Management • EMGT 5730 Fundamentals of Enterprise Resource Planning Software • EMGT 5731 Business Analytics
Supply Chain and Analytics (SCA)	• EMGT 5330 Service and Operations Management	• EMGT 5630 Quantitative Decision Making for Engineering Management • EMGT 5631 Supply Chain Management • EMGT 5731 Business Analytics
C**ertificate of Engineering Data Analytics (CEDA)**	• EMGT 5330 Service and Operations Management	• EMGT 5630 Quantitative Decision Making for Engineering Management • EMGT 5731 Business Analytics • EMGT 5732 Advanced Business Analytics

9.2. Certificates for Non-Degree Seeking Students

The **Project Management certificate** is **a non-degree seeking certificate**, which provides students a means to get specific graduate education leading to a certificate with the option of transitioning to the MS degree program (Note that this is not a certificate for the degree-seeking students). This certificate program uses a streamlined admission process without GRE and consists of the following four graduate courses:

Certificate	Core Courses	Elective Courses
Project Management Certificate	• EMGT 5231 Engineering Management Planning • EMGT 5430 Professional Project Management	• EMGT 5230 Negotiation Strategies • EMGT 5530 Organizational Analysis and Management

10. Assigned Foundation Courses and Waivers

10.1. Purpose of Assigned Foundation Courses

During the admissions process, students are often assigned foundation courses if they have some deficiencies in their undergraduate background. If you believe that you were assigned these foundation courses in error, you can work with your faculty advisor to clarify required preparation.

Foundation Courses Required for Entrance

- MATH 2413 Calculus I Credit Hours: 4
- STAT 3334 Probability and Statistics for Scientists and Engineers Credit Hours: 3 Or DSCI 3321 Statistics I Credit Hours: 3 (STAT 3334 is equivalent to DSCI 3321. Only one will be counted)

The process of receiving a waiver typically consists of the student sending a request to the faculty advisor on the grounds of previous coursework taken or demonstrated experience. The faculty advisor may then request additional information such as syllabi of courses taken.

11. Core Courses

The EMGT Program curriculum consists of six core courses (18 hours)

EMGT 5130 New Business Development
EMGT 5231 Engineering Management Planning
EMGT 5330 Service and Operations Management

EMGT 5430 Professional Project Management
EMGT 5531 Technology Planning and Management

12. Elective Courses

12.1. Purpose of Electives within the Program

There are traditionally two reasons for taking an elective course 1) To broaden the knowledge base of students and 2) to prepare students for advanced work within a specific sub-discipline.

The EMGT Program curriculum includes the following elective courses:

EMGT 5131 Legal Issues in Engineering Management
EMGT 5132 Engineering Leadership and Ethics
EMGT 5230 Negotiation Strategies
EMGT 5331 Six-Sigma Quality
EMGT 5431 Contract Management
EMGT 5530 Organizational Analysis and Management
EMGT 5630 Quantitative Decision Making for Engineering Management
EMGT 5631 Supply Chain Management
EMGT 5632 Logistics Management
EMGT 5730 Fundamentals of Enterprise Resource Planning Software
EMGT 5731 Business Analytics
EMGT 5732 Advanced Business Analytics
EMGT 5830 Modeling and Simulation
SENG 5130 Systems Engineering Processes
SENG 5332 Decision Analysis for Systems Engineering

Additional Information
The following courses may substitute for the aforementioned electives based upon permission of the faculty advisor before enrolling to satisfy specific degree requirement (e.g., 100% online option).

- SWEN 5130 Requirements Engineering
- MGMT 5133 Teamwork & Leadership Skills
- MGMT 5638 Leading Technologies

13. Thesis/non-Thesis options

13.1. Thesis Option Overview

The Thesis option consists of a traditional written thesis which requires a committee of three faculty members and a formal oral defense. Program policy states that at least

two of the thesis committee members should be full-time members of the program. While the thesis option allows students to get more deeply involved in research, there is no guarantee that a student can complete a thesis within a specified amount of time.

The thesis normally consists of two semesters of EMGT 6939 Master's Thesis Research. The student will work closely with the thesis advisor to complete the research and write a thesis.

The thesis option includes four electives from the list above or alternative courses selected with the advice and approval of the faculty advisor.

13.2. Non-thesis Option Overview

The non-thesis option consists f**ive cores, five electives** and one semester of **EMGT 6837 Capstone**. The capstone course is an individual and a team-based approach to solve a set of realistic engineering management problems. The topic is selected by the individual in consultation with the course professor. Students should (1) complete at least 7 core and elective courses (21 hours completed) after any pre-requisite courses assigned if any and (2) maintain a CumGPA of the courses in the degree plan (CPS) of at least 3.0 to be eligible for EMGT 6837 Capstone registration.

14. Other Issues

14.1. When should I Register for Classes?

Students should register for classes as soon as possible. Because graduate courses tend to be small, most students think that there is no harm to wait until the last minute (or even after the class starts) to register. The counterpoint to this is that because graduate courses tend to be small, they are more likely to be cancelled because of low enrollment. Education is similar to a business and universities cannot justify offering a class with less than 5 students. If you cannot register for a class until late in the registration process for any reason, we recommend you email the professor to declare your intent to register. Also, if you are thinking about delaying registration because you are waiting for a financial aid or fellowship check, be sure to check the university's policy on tuition payments. While most students think they have to pay as soon as they register, the fact is, most universities like UHCL have a census date when you are officially dropped for lack of payment. This tends to be about 12 days into the semester and is the real deadline for making a tuition payment.

14.2. 8-week Course Format

All or a majority of the Engineering Management courses use an 8-week course format. Each long semester has two 8-week sessions. The time required to be successful in a

graduate-level engineering course depends on many variables. A student's level of preparation, their ability to focus on the course, their level of academic maturity, and their ability to work in groups, all factor into how much time a student will need to spend on a course. A typical graduate-level course at EMGT program requires about 10-15 hours per week for a well-prepared student.

A full-time student should expect to spend about 30-45 hours per week on his or her courses. **A part-time student**, who works full-time, should only take **one course per 8-week session** (or **two courses per semester**). Online courses will require about the same time commitment. Although there is a significant amount of time required for these courses, most students have the freedom to choose when to devote time to their studies. Because of this, graduate school requires excellent time-management skills.

Student research should take about the same amount of time per Semester Credit Hour (SCH) as face-to-face courses. A typical independent study or thesis could take anywhere from 10-20 hours per week depending on how many credits you register for. Thesis work, whether for a Bachelors, Masters or Ph.D. typically requires more time and focus than students think. Before considering a thesis, try to imagine how many hours you think the project will require per week and multiply that by two or three. If you cannot devote that much time, you may want to reconsider the project.

14.3. Fully Online Option vs. Traditional Option

EMGT program is offered both face-to-face and a fully online option. Students should choose one option when they are admitted into the program. In students' admission letter, it is clearly stated whether the student belongs to the fully online (online major) or a traditional program. The fully online program requires the same rigor and effort with the traditional face-to-face program. If you are admitted into the fully online program, you should take 100% online course in your dedicated section (See 14.4. below).

14.4. How to Choose the Correct Online Course Section

All or most EMGT courses are offered in three sections, two of which are online sections. One online section has the 'location' as **UH Clear Lake** and this is for traditional students who want to take an online class whereas the other online section has the 'location' as **UHCL Online** and is for fully online students only.

14.5. How to Switch between Traditional and Online Option

Students can change their program option. For example, if you want to change from a traditional option to the online option, the students should contact **an academic advisor** at the CSE's Academic Advising office to initiate the process. Note that an

academic advisor is a school staff member, **not a faculty advisor**. It is important to understand your faculty advisors can**not** initiate the switching process.