



**Management &
Engineering
for Manufacturing**

2023-2024

Curriculum Guide

The School of Business & The School of Engineering





Management & Engineering for Manufacturing

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Departmental Contacts

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General Information:

www.mem.uconn.edu
<https://undergrad.business.uconn.edu/advising/>

Program Email:

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What is Management and Engineering for Manufacturing (MEM)?

The Management and Engineering for Manufacturing (MEM) Program is an independent academic major that belongs to both the School of Business and the School of Engineering. It is built upon a simple philosophy: *to be effective, technological innovations in manufacturing must be applied to a streamlined and simplified operating environment*. As a result of the partnership between the School of Business and School of Engineering, MEM students graduate with a BS degree jointly conferred by both schools and are part of an elite cohort with two tassels hanging from their mortarboards at graduation.

Through their studies and internships in the MEM Program, students develop an understanding of the interrelationships among the different areas of a manufacturing enterprise. An integrated education provides a competitive advantage in the manufacturing arena, in which applications of subject matter from business and engineering are equally important.

For the last decade, nearly 100% of our graduating seniors have been employed in their chosen field or have begun working on an advanced degree, such as UConn's MSBAPM (Master of Science in Business Analytics and Project Management) degree, at or shortly after graduation. Some MEM students enter an even smaller cohort of students in the MSBAPM Accelerated-degree program, in which students begin to earn credits toward their MS while still in their undergraduate career.

MEM graduates have the flexibility to work as practicing engineers or to focus more on the business side of things. Companies find MEM graduates to be well-rounded engineers that see the "big picture" due to their unique curriculum. This positions our graduates to be highly successful in obtaining coveted internships and "Leadership Development Program" positions at major companies. These introduce them to multiple facets of the business and prepare them for a "fast track" to promotion. Due to this, MEM graduates tend to secure higher starting salaries than their peers who pursue other engineering or business majors. Given the level of competition in seeking employment, employers look to hire people who are educationally well-suited for their fields. MEM provides the tools needed to be competitive.

The UConn MEM program is accredited in both engineering management and manufacturing engineering by the Accreditation Board for Engineering and Technology (ABET) – the same organization that accredits all engineering programs at UConn and other national peer institutions. Unlike other majors in the school of engineering, MEM is also accredited by the Association to Advance Collegiate Schools of Business (AACSB) as part of the UConn's School of Business.

MEM students have access to career networks for both the School of Business and the School of Engineering:

<https://career.business.uconn.edu/undergraduate/>
<https://undergrad.engr.uconn.edu/career-development>

Recent Graduate Career Data

A sample of recent graduate job titles include Cell Leader, Consulting Analyst, Operations Associate, Project Engineer, Quality Control Engineer, Manufacturing Engineer, Logistics and Operations Manager, Supply Chain Specialist, and Technology Consulting Analyst.

Our recent graduates have been employed by Accenture, Hartford Hospital, Johnson Outdoors, Legrand, Lockheed Martin, Pratt & Whitney, QuEST Global, Sikorsky, Stanley Black and Decker, and Unilever. As of the 2022 data, the median base salary for an MEM graduate was \$72,500 and the high base salary was \$86,000.

Additional salary information can be found here:

<https://career.business.uconn.edu/wp-content/uploads/sites/1076/2023/05/Infographic-MEM-2022-Outcome-Sheet.pdf>

Academic Policies

Academic Advising

All MEM students are assigned to an Academic Advisor when admitted to the program:

Class Standing:	Assigned to:
First and Second Year Students	JP Lappen
Third- and Fourth-Year Students	Dr. Tang or Dr. Calvert

All students are required to meet with their assigned Academic Advisor every semester to discuss progress towards graduation and course selection. There will be a registration hold placed on students until this meeting is completed. Students should go to their Advisor for questions regarding prerequisites, course selection, career planning, and form submissions. Students looking for permission numbers should reach out to Tracy Brunette, the Program Coordinator.

Students who wish to transfer credits from other institutions, should review their course on the UConn Transfer Course Equivalencies website at

<https://admissions.uconn.edu/apply/transfer/transfer-credit/equivalencies/>

Navy STEM Concentration and Minors

Students may elect to pursue an academic minor or the Navy STEM concentration. Minors are not required for graduation. For more information please visit:

<https://navy-stem.uconn.edu/undergraduate-research-fellowship/>
<https://catalog.uconn.edu/>
<https://www.mem.uconn.edu/what-is-mem/minors>

If you plan to pursue Navy STEM concentration, please reach out to Alex Grey for more information at alexander.grey@uconn.edu and your academic advisor. If you plan to pursue a minor, please reach out to your academic advisor.

Preliminary and Final Plans of Study

Students must submit a preliminary plan of study in the Student Administration system once they reach Junior status (54+ credits). There will be a registration hold placed until this is complete.

In order to be eligible to graduate, students apply to graduate and submit a final plan of study in the Student Administration system by the fourth week of their final semester.

For assistance completing these plans, please visit this page:

<https://undergrad.engr.uconn.edu/advising/plan-of-study>.

Supplemental Academic Standards

Students admitted to the Management and Engineering for Manufacturing (MEM) program must maintain a high standard of scholastic achievement to continue in the major program. Any student having completed 24 or more credit hours must maintain a minimum 2.79 cumulative grade point average. A student failing to meet this standard is subject to dismissal from the program. A student who is dismissed from the program can reapply once the dismissal criteria are corrected.

Supplementary Dismissal Process

Following final grades being entered into cumulative GPA's after the fall and spring semesters at UConn, the MEM program evaluates its students' academic progress against the MEM supplemental academic standards. Students who have completed 24 credits are required to maintain a 2.79

cumulative GPA in order to remain in the MEM program.

Here's what you need to know:

- When a student's cumulative GPA falls below 2.79, they will receive a supplementary dismissal letter from the program. Students who are dismissed from the MEM major will be administratively unregistered from their 2000/3000/4000 level courses in the School of Business, and their major will be changed to Undecided Engineering.
- A student falling below a 2.85 will receive a warning letter and are encouraged to seek academic assistance through the university academic supports such as the Academic Achievement Center, Engineering Tutoring Center, Writing Center, and Q Center.
- All students are encouraged to seek support, but particularly those whose GPA's fall below a 3.0.
- When a student has successfully completed one semester of Senior Design and is on track for the following Spring graduation, we will waive the dismissal process and offer support instead.

What if I have been Supplementarily Dismissed from MEM?

If you have received a dismissal letter from MEM, you should immediately contact your advisor and schedule an appointment to navigate the next steps. You may submit an appeal by writing a letter to the program directors requesting consideration to continue in the program and should include information about factors contributing to poor academic performance and plans for academic recovery. A dismissal committee will communicate a final decision to all students subject to dismissal from the MEM program. Dismissed students maintain the right to raise their GPA, retake certain courses and even reapply when they again meet the MEM eligibility criteria.

What is the timeline for Warnings and Dismissals?

These dates may have slight variation due to unforeseen complications at the University level, the MEM policy on dismissal timing is as follows:

Dismissals after the Fall Term

- Dismissal letters emailed to students approximately 2 weeks before the start of the Spring semester.
- Appeals are due 1 week before the Spring semester on the date listed in the dismissal letter received.
- Final decisions on appeals are made 2-3 weekdays before the first day of classes in the Spring semester.

Dismissals after the Spring Term

- Dismissal letters emailed to students approximately 1 week after grades and GPAs have been finalized at University.
- Appeals are due 2 weeks after grades and GPAs have been finalized at University and on the date listed in the dismissal letter.
- Final decisions on appeals are made 3 weeks after grades and GPAs have been finalized at the University.

Please discuss any questions you have regarding academic policies with your Academic Advisor. More information can be found on the MEM website: www.mem.uconn.edu.

MEM Curriculum

The MEM curriculum consists of 138* total credits including general education and major courses. Students should closely follow the below curriculum guide and use their Academic Requirements Report in Student Administration to ensure completion of their degree.

Requirements for all MEM students, both through the School of Business and through the School of Engineering, must be fulfilled. Students must work very carefully with their MEM advisor. Completion of all major requirements also fulfills all School of Business, School of Engineering, and accreditation requirements.

The Management and Engineering for Manufacturing undergraduate program educational objectives are that our alumni practice their profession with solid engineering and business knowledge and skills and have a total enterprise vision of world class manufacturing and service organizations; compete successfully using lean manufacturing and quality management principles in the design, manufacture of products, and development of services; and apply high professional standards, with up to date knowledge and personal skills, integrating global factors in their approach to engineering and business decisions.

Information Literacy

In addition to the basic competency achieved in ENGL 1007, 1010, 1011 or equivalent, all students will receive instructions on how to conduct an effective search for information in the library and how to conduct an effective search on the web for applicable engineering topics in ENGR 1000 or equivalent. As the student progresses in their program, various courses will require assignments to increase their information literacy competency.

Writing in the Major

MEM 4971W and 4972W are the senior design project courses for the program. All students must write reports on their projects. These courses provide opportunities to write professional reports with appropriate feedback and criticism from two faculty members. The report writing provides instruction in proper report structure for professional work in practice.

Internships

Students are encouraged to seek faculty-supervised manufacturing summer internships prior to their junior and senior years. Such internships may be shown on the student records by registering for MEM 3281, with instructor and advisor approval.

*Please refer to your specific catalog year as this number is subject to change

Management and Engineering for Manufacturing 2023-2024

Freshman

Semester One	Semester Two
CHEM 1127Q: General Chemistry 1 (4 credits)	MEM 1151: Intro to MEM (3 credits)
ENGR 1000: Orientation to ENGR (1 credit)	ECON 1202: Principles of Macro (3 credits)
MATH 1131Q: Calculus I (4 credits)	MATH 1132Q: Calculus II (4 credits)
CSE 1010: Intro to Computing for ENGR (3 credits)	STAT 1100Q/1000Q: Elem. STAT (4 credits)
ECON 1201: Principles of Micro (3 credits)	ENGL 1007: Writing and Composition (4 credits)
15 credits	18 credits

Sophomore

Semester One	Semester Two
MEM 2211: Intro to Manuf. Systems (3 credits)	PHIL 1104: Social Ethics (CA 1) (3 credits)
MEM 2212: Manuf. Systems Lab (1 credit)	ACCT 2001: Princ. Finan ACCT (3 credits)
MATH 2110Q: Multivariable Calculus (4 credits)	MATH 2410Q: Elem Diff. Equations (3 credits)
PHYS 1501Q: Physics for ENGR I (4 credits)	PHYS 1502Q: Physics for ENGR II (4 credits)
CE 2110: Applied Mechanics I (3 credits)	History Elective (CA 1) (3 credits)
Gen Ed (CA 2/4-int) (3 credits)	Environmental Literacy Gen Ed (3 credits)
18 credits	19 credits

Junior

Semester One	Semester Two
MEM 3221: Intro to Products and Proc (3 credits)	MEM 3231: Comp. in Manufacturing (3 credits)
ACCT 2101: Princ. of Manag. ACCT (3 credits)	FNCE 3101: Financial Management (3 credits)
OPIM 3603: Princ. Project MGMT (3 credits)	ENGR 3215: Statistical Quality Control (3 credits)
ECE 2000: Elec. Comp. ENGR Princ. (3 credits)	MENT 3101: MGMT and Interp. Behav (3 credits)
CE 3110: Mechanics of Materials (3 credits)	ME 2233: Thermodynamics (3 credits)
MSE 2101: Materials Sci and ENGR (3 credits)	BUSN Elective (3 credits)
18 credits	18 credits

Senior

Semester One	Semester Two
MEM 4971W: Senior Design I (2 credits)	MEM 4972W: Senior Design II (2 credits)
MEM 4225: Adv. Products and Proc. (3 credits)	ENGR Elective (3 credits)
MKTG 3101: Intro to Marketing MGMT (3 credits)	BLAW 3175: Legal and Ethic Env. BUSN (3 credits)
ME 3221: Manufacturing Automation (3 credits)	MENT 4900: Strategy, Policy, and Plan (3 credits)
ME 3263: Intro to Sensors and Data (3 credits)	ME 3227: Design of Machine Elements (3 credits)
Gen Ed (CA 4) (3 credits)	Free Elective (1credit)
17 credits	15 credits

Classes denoted in yellow are fall only and Classes denoted in green are spring only

Total Credits: 138

General Education Requirements

Requirement	Course	Semester	Grade
Content Area 1: Arts & Humanities	PHIL 1104: Philosophy and Social Ethics		
	HIST 1201, 1400, 1501, 1502, 1600 or 1800 <i>circle one</i>		
Content Area 2: Social Sciences	ECON 1201 & 1202: Princ of Micro/Macro		
	Select one double dipper course - ANTH 1000/W; GEOG 1700, 2000; HRTS 1007; POLS 1202, 1207; WGSS 2124		
Content Area 4: Diversity & Multicult.	*any CA 4		
Environmental Literacy Course **			
Foreign Language: 3+ years at the High School Level OR			
Elementary One			
Elementary Two			

*A list of applicable Content Area 4 courses may be found here: <https://catalog.uconn.edu/general-education/>

**Environment Literacy Courses that overlap CA 4:
ANTH 1010E, 3340E; GEOG 2350E, 2400E; HIST 2222E; MAST 1300E; NRE 2600E

*These documents are meant to be used as guides and a suggested sequence of courses you should follow. Please refer to your [Standard Advising Report](#), this enables students to view progress towards completing their academic requirements. The Official Curriculum requirements you should follow can be found in the [Catalog](#) for the academic year you matriculated into the university.

Notes: