

Spotlight Series: Engineering Management with Professor Geza Bottlik

Viterbi School of Engineering
University of Southern California

Fall 2021

Meet Professor Geza Bottlik



Professor Geza Bottlik

- Director, MS Engineering Management Program
- Degrees in Mechanical Engineering – graduate degrees from USC
- 34 years of industry experience (24 at Xerox) – Computer design, research in Physics, Industrial Engineering Management, Strategic Planning and Finance overlapping with
- 32 years at USC – Production Planning, Decision Making, Statistics, Project Management, Engineering Economy, Supply Chain Design

MS in Engineering Management

Information and course details provided in the webinar are subject to change.
Please consult the [USC Catalogue](#) for information related to the current academic year.

MS in Engineering Management

- The engineering management program is intended to prepare engineers for careers in management
- *A third of engineers become managers and are faced with problems they are unprepared for unless they have the preparation provided by this degree*
- The program is intended for both working engineers and recent graduates from bachelor programs
- Recent bachelor graduates will increase their employability and their chances of being considered for subsequent management positions, as well as becoming better engineers

Helpful Link:

<https://viterbigradadmission.usc.edu/emt>

MS in Engineering Management

- Working engineers benefit from the degree by enhancing their chances for promotion as well as becoming better engineers
- Engineers who are already managers benefit by a deeper understanding of the issues and methods involved in managing technology-oriented projects
- The program averages 100 -150 students, with about 75 graduating per year
- About 20% of the students are off campus
- Classes are taught by a combination of full-time professors and industry experts with substantial teaching experience
- Graduates find jobs in domestic and international positions and both in large and smaller companies

Related Organizations

- USC is a member of a consortium of top universities offering a degree in engineering management
- Current students have a very successful student organization dedicated to sharing their experience at USC and disseminating information about job opportunities (EMSA – Engineering Management Student Association)

MEMPC



CORNELL UNIVERSITY



DARTMOUTH COLLEGE



DUKE UNIVERSITY



JOHNS HOPKINS UNIVERSITY



MASSACHUSETTS INSTITUTE OF TECHNOLOGY



NORTHWESTERN UNIVERSITY



PURDUE UNIVERSITY



TUFTS UNIVERSITY



UNIVERSITY OF SOUTHERN CALIFORNIA

MS in Engineering Management

A minimum of 30 units is required to earn the MS in Engineering Management

Required Courses

All Courses Required – 12 units total

- ISE 500 | Statistics for Engineering Managers (3 units)
- ISE 515 | Engineering Project Management (3 units)
- ISE 544 | Leading and Managing Engineering Teams (3 units)
- ISE 561 | Economic Analysis of Engineering Projects (3 units)



Degree Available online via
DEN@Viterbi.

Required Analytics Course

One course is required – 3-4 units total.

- DSCI 552 | Machine Learning for Data Science (4 units)
- ISE 562 | Decision Analysis (3 units)

Required Technology Course

ISE 545 course is required – 3 units total.

- ISE 545 | Technology Development and Implementation (3 units)

MS in Engineering Management

Emphasis Tracks

Select one of the following three tracks (9-10 units)

Management Track

Three courses – 10 units.

- CE 502 Construction Accounting, Finance and Strategy (4 units)
- ISE 506 Lean Operations (3 units)
- ISE 527 Quality Management for Engineers (3 units)

Supply Chain and Operations Track

Three courses – 9 units

- ISE 513 Inventory Systems (3 units)
- ISE 514 Advanced Production Planning and Scheduling (3 units)
- ISE 583 Enterprise Wide Information Systems (3 units)

Custom Track

- Select three courses from Industrial and Systems Engineering or Business in consultation with an adviser.

Elective (3 units)

Select one course from Industrial and Systems Engineering or Business with adviser approval.
3-units total.

Dual Degree Options

- MS in Aerospace Engineering / MS in Engineering Management
- MS in Mechanical Engineering / MS in Engineering Management
- MS in Electrical Engineering / MS in Engineering Management
- MS in Petroleum Engineering / MS in Engineering Management
- A dual degree requires a total of 48 units
- Dual degree programs are available online via DEN@Viterbi and on-campus

More Details: <https://viterbi.usc.edu/DENDegrees>

Where Our Alumni Are Working

WHAT DO OUR STUDENTS DO?

WHAT DO OUR GRADUATES DO?



Application Criteria for the MS in Engineering Management

- Undergraduate degree in engineering, math or a hard science from a regionally-accredited university (*copy of transcripts required during application process*)
- To be competitive, a cumulative undergraduate GPA Of at least 3.0 on a 4.0 scale is recommended (*not required*)
- GRE General Test: Due to challenges that applicants may face in taking the GRE exam, the GRE exam was not required for Summer and Fall 2021 applications to Viterbi School of Engineering graduate programs.
- CV/Resume Required
- Personal Statement (Required)
- 3 Letters of Recommendation (Highly Recommended)
- TOEFL (International Applicants)

Please visit <https://viterbigradadmission.usc.edu/emt> for complete requirements

Course Delivery Methods



Methods of Course Delivery

- On-campus, full time
 - 3 classes per semester
 - 1.5 – 2 years to complete
- Online delivery via DEN@Viterbi
 - 1-2 classes per semester
 - 2.5 – 3 years to complete degree

How DEN@Viterbi Works

The Viterbi School of Engineering uses a state-of-the-art, proprietary web-based delivery system that enables students from around the world to access classes live or on-demand.

DEN@Viterbi Students:

- View the same lectures as on-campus students, with fresh content every semester
- Participate in highly interactive discussions with professors and peers
- Submit homework electronically
- Take exams at proctored testing centers near their home or work (or at USC if in the Los Angeles, Orange or Ventura counties)

DEN@Viterbi's E-Learning System



DEN@Viterbi Classroom

DEN@Viterbi Additional Info

Limited Status

- Allows strong candidates with an undergraduate degree in engineering, math or a hard science from a regionally accredited institution with a *cumulative GPA of at least 3.0* (on a 4.0 scale) to begin coursework before formal admission.
- Courses (*maximum of 12 units*) can be applied toward degree program if admitted but ***Limited Status does not guarantee formal admission.***
- Get Started this **Spring 2022** – Review [Limited Status Enrollment Details](#)

Employer Reimbursement Deferment

Students supported by a company can defer payment of up to 90% of tuition until after the semester is over.

Program Eligibility

- Your employer reimburses you for tuition at the end of each term.
- Your student account is current.

Program Participation Requirements (required every semester prior to the settlement deadline each term)

- Complete and submit deferment application
- Pay 10% of tuition, 100% of all fees and a \$100 application fee
- Sign and submit promissory note packet to uscsfs@usc.edu

For additional information: <https://sfs.usc.edu/payment/employer-reimbursement/>