# 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





- 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



- 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**







**DUKE UNIVERSITY** 







MASSACHUSETTS INSTITUTE OF TECHNOLOGY







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)

#### **Required Analytics Course**

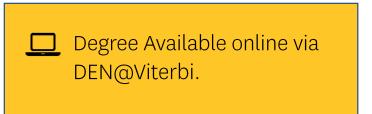
One course is required - 3-4 units total.

- 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)





#### **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 oncampus



# 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)



# **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

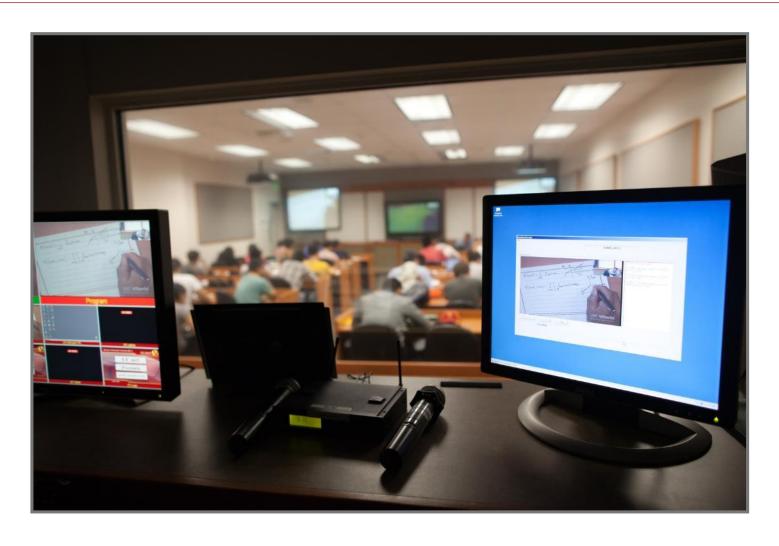
The Viterbi School of Engineering uses a state-of-the-art, proprietary web-based delivery system that enables students from around the world to access classes live or on-demand.

#### **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 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 <u>Limited Status Enrollment Details</u>

#### **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 <u>uscsfs@usc.edu</u>

