Discover Viterbi: Engineering Management with Professor Geza Bottlik

Viterbi School of Engineering
University of Southern California
Spring 2019
WebEx Quick Facts

Will I be able to get a copy of the slides after the presentation?

YES!

How can I ask a question during the information session?

1. Using the Q&A Panel, type a question in the box below the Ask drop-down menu.
2. Select a recipient from the Ask drop-down menu.

3. Click Send. We will respond as soon as we are able.
Today’s Program

- University of Southern California
- USC Viterbi School of Engineering
- Master of Science in Engineering Management
  - Program Overview
  - Application Criteria
- DEN@Viterbi
- Tuition & Fees
- Q&A
The University of Southern California

- Oldest Private University in the western U.S.
  - Founded in 1880
- 47,500 Students
  - 20,000 Undergraduates  |  27,500 Graduates
- 4,451 Full-time Faculty
- Diverse Student Population
- Located in Los Angeles
Viterbi School at a Glance

**Academic Departments**
- 8 Academic Departments

**Faculty**
- 188 tenure-track faculty
- 16 Full-time, TT NAE Members (30 Total)
- 70+ NSF CAREER, National & Presidential Young Investigator

**Student Populations (Fall 2018)**
- 2,767 Undergraduate
- 5,922 Graduate students

**Research**
- Leader in funded research
- 35+ Research Centers
- More than $207M in research expenditures annually
U.S. News & World Report, 2019

Best Engineering Graduate Schools

- Top 10 Ranked Graduate Engineering Program

Best Online Graduate Engineering Programs

- Ranked #1 Online Computer Information Technology Program (Computer Science)
- Ranked #2 Online Graduate Engineering Programs

Best Online Graduate Engineering Programs for Veterans

- Ranked #1 Online Graduate Computer Information Technology Program (Computer Science) for Veterans
- Ranked #2 Online Graduate Engineering Programs for Veterans
USC Engineering: Points of Distinction

- International Reputation for Excellence
- The Trojan Family Network: 77,000+ (engineers) strong
- Unique engineering programs available: Online, on site & on campus
- Complete range of programs
  - Doctoral, Masters and Bachelors
  - Graduate Certificates
  - Short Courses
  - Custom Programs
The Viterbi School of Engineering: A Leader in Research

Viterbi School is a consistent leader in funded research in the U.S.

- Highly interdisciplinary research environment
- Diverse research areas such as robotics, software engineering, sensor networks, vision sciences, automated construction and photonics
- Over 35 research centers
- Industrial partnerships and collaboration
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
• 29 years at USC – Production Planning, Decision Making, Statistics, Project Management, Engineering Economy, Supply Chain Design
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
• 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)
MS in Engineering Management – Program Details

Program Requirements: Minimum of 30 units

Required Courses (12 units)
- ISE 500 | Statistics for Engineering Managers
- ISE 515 | Engineering Project Management
- ISE 544 | Management of Engineering Teams
- ISE 561 | Economic Analysis of Engineering Projects

Business and Management Area (3 units)
- Select one 500 level course with business and/or management content with adviser approval

Required Engineering Elective (3 units, choose one)
- ISE 530 | Optimization Methods for Analytics
- ISE 536 | Linear Programming and Extensions
- ISE 562 | Value and Decision Theory

Electives
- Four courses for at least 12 units chosen to form a coherent program with the consent of the adviser.
Dual Degree Program Offerings

Viterbi also offers dual degrees of Engineering Management with:

- Electrical Engineering
- Aerospace Engineering
- Mechanical Engineering
- Petroleum Engineering

- A dual degree requires a total of 48 units

- Dual degree programs are available online via DEN@Viterbi and on-campus
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 (Bachelor of Science) in engineering, math, or hard science from a regionally-accredited university

- To be competitive, a cumulative undergraduate GPA of at least 3.0 on a 4.0 scale is recommended

- Satisfactory scores on the general portion of the Graduate Record Examination (GRE) that are less than five years old

- Resume/CV (Required)

- Supplemental Materials:
  - 3 Letters of Recommendation (Highly Recommended)
  - Statement of Purpose (Required)

- TOEFL (International Applicants)

Please visit [https://viterbigradadmission.usc.edu/emt](https://viterbigradadmission.usc.edu/emt) for complete requirements
Application Deadlines

Application Deadlines for 2019-2020

Fall 2019
- Deadline to submit all required materials: January 15, 2019*

Spring 2020
- Deadline to submit all required materials: September 15, 2019*
- Deadline for Scholarship Consideration (on-campus only): August 31, 2019

Fall 2020
- Deadline to submit all required materials: January 15, 2020
- Deadline for Scholarship Consideration (on-campus only): December 15, 2020

* A deadline extension for DEN@Viterbi applicants may be available. Please email DEN@Viterbi.usc.edu for more information.
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 area)
## DEN@Viterbi Overview

<table>
<thead>
<tr>
<th></th>
<th><strong>DEN@Viterbi Student</strong></th>
<th><strong>On-Campus Student</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Admission</strong></td>
<td>USC Graduate Application &amp; required materials</td>
<td>USC Graduate Application &amp; required materials</td>
</tr>
<tr>
<td><strong>Weekly Course Lectures</strong></td>
<td>Online with Interactivity</td>
<td>On USC’s Campus</td>
</tr>
<tr>
<td><strong>Online Course Archives</strong></td>
<td>✓</td>
<td>✓ *</td>
</tr>
<tr>
<td><em>(Lectures &amp; Course Documents)</em></td>
<td></td>
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<tr>
<td><strong>Assignments</strong></td>
<td>Submit electronically according to course deadlines</td>
<td>Submit during lecture or lab according to course deadlines</td>
</tr>
<tr>
<td><strong>Exams</strong></td>
<td>Proctored location</td>
<td>USC’s campus</td>
</tr>
<tr>
<td><strong>Courses per Semester (Average)</strong></td>
<td>1-2</td>
<td>3-4</td>
</tr>
<tr>
<td><strong>Degree Completion Requirements</strong></td>
<td>27-37 units with a 3.0 GPA or above</td>
<td>27-37 units with a 3.0 GPA or above</td>
</tr>
<tr>
<td><strong>USC Diploma (No Distinction)</strong></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

*DEN@ViterbiSections Only
DEN@Viterbi’s E-Learning System

DEN@Viterbi Classroom
DEN@Viterbi’s E-Learning System

Table of Contents → Week 4 → Lecture Video 09/13/2017

Breadcrumbs for easy navigation

Pull-out tab for easy weekly content access

Player controls include play/pause, and forward/rewind 30 seconds

Bookmark needed content areas

Navigate to the next item or previous

Stream in HD, SD, or on your mobile device

Play HD (1.5MB)  Play SD (750KB)  Android / iOS

USC Viterbi
School of Engineering
DEN@Viterbi’s E-Learning System

Helium Porosity vs. Air Permeability

- Used to select porosity cut-offs, for reservoir rocks.
- Based on permeability values.

Donnel G. Hill, PhD, R. Op, R. O., R. P. O., L. P. O.

PTE-461: Fall 2017 Section 3: Petrophysics  
Slide No.: 23
Student Interactivity & Group Meetings

- All DEN@Viterbi students are provided access to their own meeting rooms which can be used for several purposes:
  - Enable video communication (web and mobile)
  - Integrate phone conferencing
  - Integrate fixed room IP video systems
  - Desktop sharing
  - Set up meetings with faculty, teaching assistants and peers

- Call in during live lectures

- Participate in live chats and threaded discussion boards
Question: Is there any difference between earning a Master’s degree on campus vs. via DEN@Viterbi?

Answer: NO. DEN@Viterbi is a delivery method. Students adhere to the:
- Same Admission Criteria
- Same Curriculum
- Same Exams and Homework
- Same Academic Standards and Graduation Requirements

Therefore...

You earn the same diploma whether you earn the degree on-campus or online through DEN@Viterbi.
DEN@Viterbi Additional Info

- Limited Status
  - Allows strong candidates to begin coursework before formal admission.
  - Courses (maximum of 12 units) can be applied toward degree program once admitted but **limited status does not guarantee admission**.

- Get Started Summer 2019: [https://viterbigradadmission.usc.edu/denviterbi/getting-started/](https://viterbigradadmission.usc.edu/denviterbi/getting-started/)

- Tuition Deferment Program
  - Students supported by company can defer “up front” payment of tuition until after the semester is over.
  - Company must pay 75-100% of tuition to be eligible for program.

- For additional information: [https://viterbigrad.usc.edu/tuition-and-funding/employer-supported](https://viterbigrad.usc.edu/tuition-and-funding/employer-supported)
Tuition & Fees (2018-2019)

<table>
<thead>
<tr>
<th>PER-COURSE FEES</th>
<th>Unit Cost</th>
<th>Tuition for 3-Unit Course</th>
<th>Tuition for 4-Unit Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition for 500/600 level course</td>
<td>$2,005</td>
<td>$6,015</td>
<td>$8,020</td>
</tr>
</tbody>
</table>

Degree Programs are 27-36 units (9-11 courses)

For an overview of additional fees, please visit: https://viterbigradadmission.usc.edu/programs/masters/tuition-funding/
Getting Started

For those interested in taking classes on campus:

- Visit USC campus
- Start your application:
  http://www.usc.edu/admission/graduate/apply

For those interested in taking classes online via DEN@Viterbi:

- Start as a Limited Status Student in Summer 2019 -or-
- Start your application:
  http://www.usc.edu/admission/graduate/apply
Contact Us

USC Viterbi School of Engineering
Graduate & Professional Programs

✉️ On Campus: viterbi.gradprograms@usc.edu
✉️ DEN@Viterbi: DEN@Viterbi.usc.edu

📞 213.740.4488

🌐 http://viterbi.usc.edu/gradprograms