DEN@Viterbi
ELECTRICAL ENGINEERING ORIENTATION

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EE Graduate Student Advisors
Phone: 213-740-4447
Location: EEB 102
AGENDA

• EE Department Contact Information
• Important Dates & Deadlines
• Programs & Degree Requirements
• EE Department Policies, Procedures & Tips
• DEN D-clearance & Contact Information
• Q & A
EE Graduate Student Advisors

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# UNIVERSITY CALENDAR – Fall 2019

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>August 26</td>
<td>Spring semester classes begin</td>
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<tr>
<td>September 2</td>
<td>Labor Day, University Holiday</td>
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<tr>
<td>Sept. 13</td>
<td>Last day to register and add classes; last day to drop a class and receive a refund</td>
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<tr>
<td>October 11</td>
<td>Last day to drop a class without a mark of “W” on transcript</td>
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<tr>
<td>October 17-18</td>
<td>Fall Recess</td>
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<tr>
<td>November 15</td>
<td>Last day to drop a class with a mark of “W”</td>
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<tr>
<td>Nov 27-Dec 1</td>
<td>Thanksgiving recess</td>
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<tr>
<td>Dec 11-18</td>
<td>Final Exams</td>
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PROGRAM REVIEW

• Masters of Science in Electrical Engineering
• Masters of Science in Computer Architecture
• Masters of Science in Computer Engineering
• Masters of Science in Computer Networks
• Masters of Science in Machine Learning and Data Science
• Masters of Science in Electrical Engineering/Engineering Mgmt.
• Masters of Science in Electric Power
• Masters of Science in Financial Engineering
• Masters of Science in Green Technologies
• Masters of Science in Multimedia and Creative Technologies
• Masters of Science in VLSI Design
• Masters of Science in Wireless Health Technology
• Masters of Science in Wireless Networks
Masters of Science in Electrical Engineering

“Build your own degree” program. No required courses. Students must complete at least 15 units from one of our academically related areas: Computer Networks, Computer Architecture, Communications, Controls, Data Science, Electric Power, Electromagnetics, Optics, Photonics, Mixed-Signal Integrated Circuits, Signal and Image Processing, and VLSI/CAD.

- Minimum number of units to earn your degree: **28 units**.
- Minimum GPA required for Graduation: **3.0 GPA**.
- Minimum number of units at the 500 level or above: **19 units**.
- Minimum number of units in electrical engineering: **20 units**.

Read more about our degree programs and our academically related areas (flowcharts) here:
Masters of Science in Computer Architecture

The Masters of Science in Computer Architecture cannot currently be completed through DEN. Unfortunately, a large portion of the required coursework are labs that are only offered on campus.

If you are interested in joining this program and will eventually be able to complete courses on campus, please contact us directly and we’ll advise you on how to proceed.
Masters of Science in Computer Engineering

The MS in Computer Engineering degree is earned by completing an integrated program of at least 28 units of approved coursework emphasizing three key areas: **Computer Architecture, Networks** and **VLSI/CAD**. Students must take at least one course from two of the three areas. Here is a listing of the most commonly registered DEN courses in the Computer Engineering program.

**Computer Architecture:**
- EE 457 - Computer Systems Organization
- EE 532 - Wireless Internet and Pervasive Computing
- EE 542 - Internet and Cloud Computing
- EE 557 - Computer Systems Architecture

**Networks:**
- EE 450 - Introduction to Computer Networks
- EE 550 - Design and Analysis of Computer Communication Networks
- EE 555 - Broadband Network Architectures
- EE 597 - Wireless Networks
Masters of Science in Computer Engineering cont.

VLSI/CAD:
• EE 477 - MOS VLSI Circuit Design
• EE 536a/b - Mixed-Signal Integrated Circuit Design
• EE 537 - Modern Solid-State Devices
• EE 577a/b - VLSI System Design
• EE 658 - Diagnosis and Design of Reliable Digital Systems

*Note: Approved Computer Science coursework can also be applied toward the Computer Engineering degree. Please speak to your respective advisor for more information. Read more here: [http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7759](http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7759)

• **Minimum number of units to earn your degree:** 28 units.
• **Minimum GPA required for Graduation:** 3.0 GPA.
• **Minimum number of units at the 500 level or above:** 19 units.
• **Minimum number of units in Electrical Engineering:** 20 units.
Masters of Science in EE Computer Networks

Fundamental Courses (3 Courses Required*)
• CSCI 402 - Operating Systems
• EE 450 - Introduction to Computer Networks
• EE 503 - Probability for Electrical and Computer Engineers
• EE 457 - Computer Systems Organization
*The fundamental courses may also be satisfied by passing EE placement exams.

Required Courses (3 of the following 4 courses)
• CSCI 551 - Computer Communications
• EE 550 - Design & Analysis of Computer Communication Networks
• EE 555 - Broadband Network Architectures
• EE 597 - Wireless Networks

Remaining units to be completed from list of approved electives. Read more here:
http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7780&returnto=2401
Masters of Science in EE Computer Networks cont.

- Minimum number of units to earn your degree: 27 units.
- Minimum GPA required for Graduation: 3.0 GPA.
- Minimum number of units at the 500 level or above: 18 units.
- Minimum number of units in Electrical Engineering: 15 units.
Masters of Science in Electrical Engineering/Engineering Management

This dual degree program is designed for graduate electrical engineers whose career objectives lead to increasing technical management responsibilities.

- All applicants must meet EE and ISE admissions requirements.
- Minimum number of units to earn your degree: **48 units**.
  - EE units: 24
  - ISE units: 18
  - Approved elective units: 6
- All courses counted toward dual degree must be taken at the 500-level, except those 400-level courses required by the MSEE degree.
- Minimum GPA required for Graduation: 3.0 GPA.
Masters of Science in EE Electric Power

Fundamental Courses (All 4 Required)
- EE 443 - Introduction to Power Systems
- EE 444 - Power Systems Technology
- EE 521 - Power System Analysis and Design
- SAE 515 - Sustainable Infrastructure Systems

Remaining units to be completed from list of approved electives. Read more here: http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7812&returnto=2401

- Minimum number of units to earn your degree: **28 units**.
- Minimum GPA required for Graduation: **3.0 GPA**.
Masters of Science in Financial Engineering

**Required Courses** (All courses are required with the option of taking either ISE 563 or FBE 559).

- GSBA 548 - Corporate Finance
- ISE 563 - Financial Engineering or FBE 559 - Management of Financial Risks
- EE 503 - Probability for Electrical and Computer Engineers
- EE 512 - Stochastic Processes
- EE 518 - Mathematics and Tools for Financial Engineers
- EE 590 - Directed Research

*The Remaining coursework must be completed from two areas of electives: Finance, Business & Economics and Optimization, Simulations & Stochastic Processes. Students must take 2 courses from each area.*
Masters of Science in EE Financial Engineering cont.

*Please note, in the Optimization area:

- Students can take ISE 525, but cannot take EE 517 as well.
- Students cannot take both CSCI 455x and CSCI 570.
- Students cannot take both EE 553 and ISE 520.
- Students can take ISE 520, which has replaced ISE 530.

**Students can also take EE 660 or CSCI 567**

*Read more here:*
http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7785&returnto=2401

- Minimum number of units to earn your degree: **30 units**.
- Minimum GPA required for Graduation: 3.0 GPA.
- Minimum number of units at the 500 level or above: 18 units.
- Minimum number of units in Electrical Engineering: 18 units.
Masters of Science in Green Technologies

Students pursuing the MS in Green Technologies are required to take two courses in three topical areas: Green Systems and the Environment, Energy Technology and Efficiency, and Sustainability and Society. Students are also required to select three approved elective courses.

**Green Systems and the Environment:**
- ISE 576 - Industrial Ecology: Technology-Environment Interaction (Spring)
- SAE 515 - Sustainable Infrastructure Systems (Fall)

**Energy Technology and Efficiency:**
- CHE 510: Energy and Process Efficiency (Fall) or
  AME 577: Survey of Energy and Power for a Sustainable Future (Spring)
- EE 526: Renewable Energy in Power Systems (Spring) or
  ENE: 505 Energy and the Environment (Fall)

**Sustainability and Society:**
- CE 469: Sustainable Design and Construction (Fall)
- ENE 502: Environmental and Regulatory Compliance (Spring)
Masters of Science in Green Technologies cont’d.

Read more here:
http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7788&returnto=2401

- Minimum number of units to earn your degree: 27 units.
- Minimum GPA required for Graduation: 3.0 GPA.
- Minimum number of units at the 500 level or above: 18 units.
- Minimum number of units in the Viterbi School of Engineering: 18 units.
Masters of Science in Machine Learning and Data Science

The Masters of Science in Machine Learning and Data Science cannot currently be completed through DEN. Unfortunately, a large portion of the required coursework are labs that are only offered on campus.

If you are interested in joining this program and will eventually be able to complete courses on campus, please contact us directly and we’ll advise you on how to proceed.
Masters of Science in EE Multimedia & Creative Technologies

**Required courses:**
- EE 483 - Introduction to Digital Signal Processing
- EE 519 - Speech Recognition and Processing for Multimedia
- EE 569 - Introduction to Digital Image Processing

Remaining units to be completed from list of approved electives. Read more here:
http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7781&returnto=2401

- Minimum number of units to earn your degree: 27 units.
- Minimum GPA required for Graduation: 3.0 GPA.
- Minimum number of units at the 500 level or above: 18 units.
- Minimum number of units in Electrical Engineering: 18 units.
- No more than 4 units of electives can be taken outside of the Viterbi School.
Masters of Science in EE VLSI

All courses are required with the option of taking either EE 577b or EE 536b (though both can be taken if desired):

- EE 577a - VLSI System Design
- EE 479 - Analog Integrated Circuit Design or EE 536a - Mixed-Signal Integrated Circuit Design
- EE 552 - Asynchronous VLSI Design
- EE 577b - VLSI System Design or EE 536b - Mixed-Signal Integrated Circuit Design*

Remaining units to be completed from list of approved electives. Read more here: http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7782&returnto=2401

- Minimum number of units to earn your degree: 27 units.
- Minimum GPA required for Graduation: 3.0 GPA.
- Minimum number of units at the 500 level or above: 18 units.
- Minimum number of units in Electrical Engineering: 18 units.
Masters of Science in EE Wireless Health Technology

The Masters of Science in EE Wireless Health Technology cannot currently be completed through DEN. Unfortunately, a large portion of the required coursework is offered through the Keck School of Medicine. At this point, there is no plan to offer these courses online through DEN.

If you are interested in joining this program and will eventually be able to complete courses on campus, please contact us directly and we’ll advise you on how to proceed.
Masters of Science in EE Wireless Networks

Entrance Requirement: Students must pass EE 450 - Introduction to Computer Networks or pass the EE 450 placement exam to complete the degree requirements.

Required Courses (15 units)
- CSCI 402 - Operating Systems
- EE 503 - Probability for Electrical and Computer Engineers
- EE 511 - Simulation Methods for Stochastic Systems (Note: EE 511 is typically not offered through DEN)
- EE 535 - Mobile Communications
- EE 597 - Wireless Networks

Remaining units to be completed from list of approved electives. Read more here: http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7784&returnto=2401
Masters of Science in EE Wireless Networks cont.

• Minimum number of units to earn your degree: 27 units.
• Minimum GPA required for Graduation: 3.0 GPA.
• Minimum number of units at the 500 level or above: 18 units.
• Minimum number of units in Electrical Engineering: 18 units.
EE Department Policies, Procedures & Tips

• Refer to the USC Schedule of Classes for planning purposes [http://classes.usc.edu/](http://classes.usc.edu/).
• We waive 300-level or below pre-requisites for graduate students upon request.
• Cross-listed courses may qualify for credit as EE courses (i.e. CSCI 455x is EE 455).
• Transfer Credit – possible to transfer up to 4 units.
• If this is your first semester or if you’re working full-time, we strongly recommend only taking 1 course.
• Check your USC email regularly! Forward to another email account if necessary.
• When sending an e-mail, please always include your USC ID # in all messages.
HOW TO REQUEST D-CLEARANCE FROM DEN

All DEN courses require D-clearance.

1. Login to DEN Desire2Learn: [http://courses.uscden.net](http://courses.uscden.net)
2. Go to DEN@Viterbi Tools on the navigation bar
3. Select “Request D-clearance” link, select the term, and select a course
4. Approval process takes 1-2 business days. To view the status of a request, click on “Check D-Clearance Status”
5. You can register once your request has been processed. D-clearances expire 7 days from when it is issued so register as soon as you obtain it to secure a seat in a course.

For questions on D-Clearance status, contact [den@gapp.usc.edu](mailto:den@gapp.usc.edu)
1. Bookmark https://courses.uscden.net
2. Your D2L username is your full USC Email Address
3. If you do not remember your D2L password, click “Forgot your password?”

Sign up for an exclusive one-on-one training session inside a virtual classroom to learn all about Desire2Learn: https://viterbigrad.usc.edu/technical-support/training-options/
## CONTACT INFO

### OFFICE OF GRADUATE AND PROFESSIONAL PROGRAMS

**Location:** Olin Hall of Engineering (OHE), Rm. 106  
**Hours:** Mon. - Fri. 8:30 am - 5 pm (Pacific Time)  
**Phone:** (213) 740-4488  |  **Fax:** (213) 821-0851  
[https://viterbigrad.usc.edu/](https://viterbigrad.usc.edu/)

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<tr>
<th>DEN@Viterbi Support</th>
<th>Contact Information</th>
<th>Staff</th>
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<tbody>
<tr>
<td>Technical support,</td>
<td><a href="mailto:dentsc@usc.edu">dentsc@usc.edu</a></td>
<td>Rebecca Lee</td>
</tr>
<tr>
<td>Desire2Learn training,</td>
<td>213-740-9356</td>
<td>Bianca Richter</td>
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<tr>
<td>Homework</td>
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<tr>
<td></td>
<td><a href="mailto:den@gapp.usc.edu">den@gapp.usc.edu</a></td>
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<tr>
<td></td>
<td><a href="mailto:denexam@usc.edu">denexam@usc.edu</a></td>
<td>Shirley Schutt</td>
</tr>
<tr>
<td></td>
<td>213-740-9356</td>
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<th>Staff</th>
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<tbody>
<tr>
<td>General advisement</td>
<td><a href="mailto:ptrinida@usc.edu">ptrinida@usc.edu</a></td>
<td>Patty Rinehart</td>
</tr>
<tr>
<td>Policies &amp; Procedures</td>
<td>213-740-0116</td>
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<tr>
<td>Deferment or Vouchers</td>
<td><a href="mailto:susannas@usc.edu">susannas@usc.edu</a></td>
<td>Susanna Sahakian</td>
</tr>
<tr>
<td></td>
<td>213-740-8198</td>
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THANK YOU!

HAVE A GREAT FALL SEMESTER!

FIGHT ON!

University of Southern California
School of Engineering