

DEN@Viterbi ELECTRICAL ENGINEERING ORIENTATION

Ryan Pineda, Gabby Garcia, Jaimie Zelada & Sam Graves ECE Graduate Student Advisors Phone: 213-740-4447 Location: EEB 102



University of Southern California



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

Ryan Pineda

Gabby Garcia

Jaimie Zelada

Sam Graves









rcpineda@usc.edu Advises students whose last name begins with the letters A - G garc635@usc.edu Advises students whose last name begins with the Letters H - L zelada@usc.edu Advises students whose last name begins with the Letters M – V smgraves@usc.edu Advises students whose last name begins with the Letters W - Z



EE ADVISORS University of Southern California

PROGRAMS OFFERED ON DEN



- Masters of Science in Electrical Engineering
- Masters of Science in Computer Engineering
- Masters of Science in Computer Networks
- 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 VLSI Design



Other programs in our department



- Masters of Science in Computer Architecture
- Masters of Science in Machine Learning and Data Science
- Masters of Science in Wireless Health Technology
- Masters of Science in Wireless Networks
- Masters of Science in Quantum Information Science

These programs 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 Electrical Engineering

"Build your own degree" program. <u>No required courses</u>. 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:

http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7779&returnto=2401





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: <u>http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7759</u>

- 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: <u>http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7780&returnto=2401</u>





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: <u>http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7812&returnto=2401</u>

- 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 each of the 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 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: <u>http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7782&returnto=2401</u>

- 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 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 (16 units)

- CSCI 402 Operating Systems
- EE 503 Probability for Electrical and Computer Engineers
- EE 535 Mobile Communications
- EE 597 Wireless Networks

Remaining units to be completed from list of approved electives. Read more here: <u>http://catalogue.usc.edu/preview_program.php?catoid=8&poid=7784&returnto=2401</u>





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/.
- 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
- 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@vase.usc.edu



DESIRE2LEARN LOGIN & TRAINING



bttps://courses.uscden.net/d2l/login

Log in to view your courses offered through DEN@Viterbi, explore tools and features, and customize your eLearning experience for supported by DEN@Viterbi. Students must be registered and approved to view select courses. If you are having problems logging password link. If you have problems logging on or seeing your courses, please contact DEN@Viterbi Technical Support Center office at dentsc@ DEN@Viterbi Students: First Time Logging in7 You must create a profile first before you can log in.	or programs and courses g on, please try the forgot junic edu or 213-740-9366
Log in to view your courses offered through DEN@Viterbi, explore tools and features, and customize your eLearning experience fi supported by DEN@Viterbi. Students must be registered and approved to view select courses. If you are having problems logging password link. If you have problems logging on or seeing your courses, please contact DEN@Viterbi Technical Support Center office at dentsc DEN@Viterbi Students: First Time Logging In? You must create a profile first before you can log in.	or programs and courses g on, please try the forgot busc edu or 213-740-9356.
If you have problems logging on or seeing your courses, please contact DEN@Viterbi Technical Support Center office at dentsc@ DEN@Viterbi Students: First Time Logging in? You must create a profile first before you can log in	punc edu or 213-740-9356
DEN@Viterbi Students: First Time Logging in? You must <u>create a profile</u> first before you can log in	
You must create a profile first before you can log in	
On-campus students don't need to create a profile as it is generated automatically	
Note: DEN Blackboard users logging into DEN Desire2Learn for the first time should use the "forgot your password" link	below to set your passw
before trying to log-in.	
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- 1. Bookmark https://courses.uscden.net
- 2. Your D2Lusername 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

VITERBI ADMISSION & STUDENT ENGAGEMENT (VASE)

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/

DEN@Viterbi Support	Contact Information	Staff
Technical support,	dentsc@usc.edu	Bianca Richter
Desire2Learn training,	213-740-9356	
Homework		
DEN d-clearance inquiries	<u>den@vase.usc.edu</u>	
Exams	denexam@usc.edu	Shirley Schutt
	213-740-9356	
VASE Advisor	ptrinida@usc.edu	Patty Rinehart
General advisement	213-740-0116	
Policies & Procedures		



University of Southern California



THANK YOU!

HAVE A GREAT SEMESTER! FIGHT ON!



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