



# Systems Architecting and Engineering

DEN@Viterbi Orientation

*SAE Graduate Student Advisor, Luis Saballos*



# AGENDA

- Welcome
- Department Overview
- Degree Requirements
- Department Policies, Procedures, Tips
- ASTE DEN
- Academic Advising
- Questions?



# Welcome to USC and DEN@Viterbi



## Luis Saballos, SAE Student Advisor

### Contact Information

Email            Lsaballo@usc.edu

Phone           (213) 821-4234

- Advise undergraduate, certificate, master, and doctoral students
- Advise for the Astronautical Engineering (ASTE) and the Systems Architecting and Engineering (SAE) degree programs



# Systems Architecting and Engineering Department Overview



# SAE DEPARTMENT OVERVIEW

- Master of Science in Systems Architecting and Engineering (MS SARE)
- Graduate Certificate in Systems Architecting and Engineering (GCRT SARE)

**Both degree programs are housed under the Astronautical Engineering Department within Viterbi.**

Main website: <https://sae.usc.edu/>



Director of SAE  
Dr. Azad Madni



# Systems Architecting and Engineering

## Degree Requirements

# Master of Science in Systems Architecting and Engineering (MSSARE)



**Requirements for Graduation:** A total of 30 units (10 classes) with a 3.0 GPA. A maximum of 9 units at the 400-level may apply towards the degree. No more than 6 units of Special Topics courses (499 or 599) may be applied. Directed Research (any 590 course) is restricted to 3 units.

- 15 units of Required Courses
- 3 units in the Technical Management Area (choose from specific list of courses)
- 3 units in the General Technical Area (choose from specific list of courses)
- 9 units in the Technical Specialization Area (open to most 400 or 500-level Viterbi courses. See catalogue description below for recommended classes based on concentration interest)

## Course Planning Tips:

- Create a course plan to stay on track: <https://16yvut3lcf341mbymkpwo7zt-wpengine.netdna-ssl.com/wp-content/uploads/2017/04/Master-Plan-after-2014.pdf>
- SAE 549 is recommended to be taken in your first enrolled semester

Complete list of required courses for completing the MS SARE program are here:  
[https://catalogue.usc.edu/preview\\_program.php?catoid=11&poid=10946&hl=sae&returnto=search](https://catalogue.usc.edu/preview_program.php?catoid=11&poid=10946&hl=sae&returnto=search)



# Degree Requirements for the SAE Master's Program

## Required Courses – 5 Courses (3 units each)

1. ISE 460 Engineering Economy  
or  
SAE 560 Economic Considerations for Systems Engineering
2. SAE 541 Systems Engineering Theory and Practice
3. SAE 542 Advanced Topics in Systems Engineering
4. SAE 547 Model-Based Systems Architecting and Engineering  
or  
SAE 548 Systems/System-of-Systems Integration and Communication
5. SAE 549 Systems Architecting



# Degree Requirements for the SAE Master's Program



## **Technical Management Area – Pick 1 course (3 units)**

CE 556 Project Controls — Budgeting and Estimating  
DSO 580 Project Management  
ISE 515 Engineering Project Management  
ISE 517 Modern Enterprise Systems  
ISE 544 Management of Engineering Teams  
ISE 562 Value and Decision Theory  
ISE 585 Strategic Management of Technology  
MOR 561 Strategies in High-Tech Businesses  
SAE 550 Systems Architecting and the Political Process

## **General Technical Area– Pick 1 course (3 units)**

CSCI 510 Software Management and Economics  
CSCI 577a Software Engineering  
CSCI 577b Software Engineering  
ISE 506 Lean Operations  
ISE 580 Performance Modeling with Simulation  
SAE 543 Case Studies in Systems Engineering and Management  
SAE 550 Systems Architecting and the Political Process

# Degree Requirements for the SAE Master's Program



## Technical Specialization Area – (9 units)

Courses are intended to complement the student's prior education and experience toward becoming a well-rounded systems architect-engineer or architect-manager. With a few exceptions, the courses should come from the recommended list from the catalogue:

[https://catalogue.usc.edu/preview\\_program.php?catoid=11&poid=10946&hl=sa&returnto=search](https://catalogue.usc.edu/preview_program.php?catoid=11&poid=10946&hl=sa&returnto=search)

The student may choose from a large variety of technical specializations spanning all departments in the Viterbi School of Engineering. Flexibility is emphasized in this choice.



# Graduate Certificate in Systems Architecting and Engineering (GCRTSARE)

**Requirements for Graduation:** A total of 15 units (5 classes) with a 3.0 GPA. The courses taken for the certificate may be applied later to the Master of Science in Systems Architecting and Engineering.

Create a course plan to stay on track:

<https://16yvut3lcf341mbymkpwo7zt-wpengine.netdna-ssl.com/wp-content/uploads/2017/04/Certificate-Plan-after-2014.pdf>

Complete list of required courses for completing the GCRT SARE program are here:

[https://catalogue.usc.edu/preview\\_program.php?catoid=11&poid=10947&hl=sae&returnto=search](https://catalogue.usc.edu/preview_program.php?catoid=11&poid=10947&hl=sae&returnto=search)



# Degree Requirements for the SAE Certificate Program

## Required Courses – Choose 5 (3 units each)

ISE 460 Engineering Economy

or

SAE 560 Economic Considerations for Systems Engineering

ISE 515 Engineering Project Management

ISE 544 Management of Engineering Teams

SAE 541 Systems Engineering Theory and Practice

SAE 542 Advanced Topics in Systems Engineering

SAE 547 Model-Based Systems Architecting and Engineering

SAE 548 Systems/System-of-Systems Integration and Communication

SAE 549 Systems Architecting

SAE 574 Net-Centric Systems Architecting and Engineering

# Master of Science Program in Systems Architecting and Engineering- Common Questions



Typical time to complete the program:

- Full time students: 3-4 semesters (2-3 courses/semester)
- Part-time students: 3-4 year (1-2 courses per semester)

Course Sequencing:

- Course sequence is entirely up to the student. Advisors help as needed.
- Exceptions: courses with pre-requisites.

Course Substitutions:

- Accepted on a case by case basis (please see me for further details)

Technical Specialization courses not listed in catalog:

- Accepted on a case by case basis; subject to Program Director approval (please see me for further details)



# SAE Policies, Procedures, Tips

# SAE Policies, Procedures, Tips



- Maintain a 3.0 grade point average
- USC requires graduate students to maintain continuous enrollment every Fall and Spring semester.
- You have 5 years to complete your degree program from the term of your first course.
- Review your STARS Report every semester.
  - The STARS Report includes the degree and major you are currently pursuing, GPA, Catalogue year, admission term, the number of units and course required to fulfill your degree requirements.
  - You can access it through the “OASIS” section of the myUSC portal (<http://my.usc.edu>).
  - Your STARS Report is manually activated after you enroll in your first course as an officially admitted student.
- Transfer Credit – it is possible to transfer in up to 6 units (two courses). Please email me directly for more information.
- If you desire to change majors, you can do so after your first semester if you receive a 3.0 or higher (contact the other department for the transfer procedures)
- **Check your USC email regularly!**



# SAE Policies, Procedures, Tips – Cont'd

- Refer to the USC Schedule of Classes for planning purposes  
<http://classes.usc.edu/>
- SAE Study Plans:  
<https://sae.usc.edu/programs/>
- If you will be working full-time, we strongly recommend only taking 1 class in your first semester
- You have 5 years to complete your degree program from the term of your first course.
- Core required courses are offered every fall and spring semester, and selected courses are offered in the summer term.
- In summer, some courses are offered in a fast-paced 6 week format. It is not recommend that you take two courses that overlap in the summer.
- All DEN section require Departmental Clearance (D-Clearance) prior to registering for classes





# SAE DEN (Distance Education Network)

# VSOE's Distance Education Network (DEN@Viterbi)



## Broadcast master control



## Distance Education Network (DEN)

- webcast over the Internet, with lectures viewed anywhere in the world on PC (standard high-speed connection; no special software)
- on-campus students attend lectures in class
- password-protected lectures can be viewed asynchronously any time during the entire semester
- class notes, homework assignments, and handouts transmitted electronically
- exams: on campus for students in the Greater Los Angeles area and proctored (e.g., at local community colleges) for remote students

# VSOE's Distance Education Network (DEN@Viterbi)



**DEN classrooms**



- face camera
- overhead camera
- laptop connection
- broad(web)cast monitor



# DESIRE2LEARN LOGIN & TRAINING

<https://courses.uscdcn.net/d2l/login>

**USC Viterbi**  
School of Engineering

## USC Viterbi School of Engineering – DEN@Viterbi

Log in to view your courses offered through DEN@Viterbi, explore tools and features, and customize your eLearning experience for programs and courses supported by DEN@Viterbi. Students must be registered and approved to view select courses. If you are having problems logging on, please try the forgot password link.

If you have problems logging on or seeing your courses, please contact DEN@Viterbi Technical Support Center office at [dentsc@usc.edu](mailto:dentsc@usc.edu) or 213-740-9356.

### DEN@Viterbi Students: First Time Logging 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 password before trying to log in.

Username \*

  
Password \*  
 [Forgot your password?](#)

1. Bookmark <https://courses.uscdcn.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/>



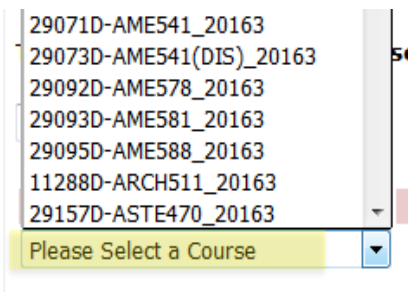
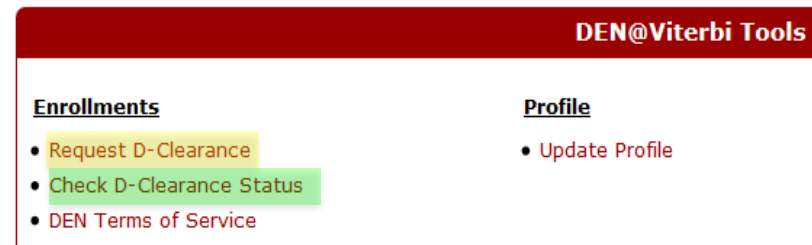


# HOW TO REQUEST D-CLEARANCE FROM DEN

All DEN courses require D-clearance.



Student FAQ **DEN@Viterbi Tools**



To begin D-Clearance, Please select a term to apply for 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](mailto:den@vase.usc.edu)



# DEN@Viterbi Contacts

**Viterbi Admission & Student Engagement Office**

**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 d-clearance inquiries** [den@vase.usc.edu](mailto:den@vase.usc.edu)

DEN@Viterbi Support	Contact Information	Staff
Technical support, Desire2Learn training, Homework	<a href="mailto:dentsc@usc.edu">dentsc@usc.edu</a> 213-740-9356	Rebecca Lee Bianca Richter
DEN d-clearance inquiries	<a href="mailto:den@vase.usc.edu">den@vase.usc.edu</a>	
Exams	<a href="mailto:denexam@usc.edu">denexam@usc.edu</a> 213-740-9356	Shirley Schutt
VASE Advisor <ul style="list-style-type: none"><li>• General advisement</li><li>• Policies &amp; Procedures</li></ul>	<a href="mailto:ptrinida@usc.edu">ptrinida@usc.edu</a> 213-740-0116	Patty Rinehart



# Academic Advising



# Academic Advising Appointments

**Luis Saballos, SAE Student Advisor**

Email: [Lsaballo@usc.edu](mailto:Lsaballo@usc.edu) Phone: (213) 821-4234

- I am available by email and phone if you have any questions. If you send an email, please include your 10-digit USC ID number
- Scheduling an appointment is best if you have more detailed questions.
- Advisement Appointment link: <https://myviterbi.usc.edu/> (you can find my name under the Astronautical Engineering Department)
- When scheduling a phone appointment, please indicate that a phone appointment is what is being scheduled.





# Academic Advising Appointments cont'd

myViterbi Advisement Appointment System

<https://myviterbi.usc.edu/>

**myViterbi**

## Announcements

## Student Resources

- Academic Integrity Introduction
- Advisement Appointment System
- Application to Graduate



# THANK YOU!

*HAVE A GREAT SPRING 2020 SEMESTER!  
FIGHT ON!*

*A recording of this online orientation and presentation will be available for viewing  
and download on the VASE website at*

<https://viterbigrad.usc.edu/academic-services/new-student-information/>.