2023 DEN Department Orientation
Systems Architecting and Engineering Programs
• Please direct your attention to the short presentation.

• At the end of the presentation, you may ask questions via the Q&A window.

• The chat window is reserved for announcements. Please do not use the chat window for questions.
AGENDA

1. General Orientation Reminders
2. Student Support Services
3. Systems Architecting and Engineering
4. Reminders and Resources
5. Q & A
DEN General Orientation Reminders

• USC Welcome Packet pdf + DEN General Orientation Recording
  • https://viterbigrad.usc.edu/ms-denviterbi-new-student-information/
  • Both are mandatory, please review if you have not already

• USC Mandatory Online Trainings
  • Found in myUSC > Safety & Wellness, completion is required. Hold placed if not completed.

• Remember to Create DEN@Viterbi Profile Before Registration
  • viterbi.usc.edu/denprofile

• Limited Status Students
  • USC NetID and email will be created within 2 weeks of the start of the term or within 3 days after enrollment of you register after start of term.
  • General advisement for limited status students: den@vase.usc.edu

• After Registration, Technical Support and Training is available for DEN@Viterbi Students
  • https://viterbigrad.usc.edu/technical-support/training-options/
  • Much is covered in DEN general orientation, please review that first
Student Support Services at Viterbi

Academic Department Advising
Academic advising on course registration and planning for future semesters.

VASE DEN Student Services
General advisement and policies and procedures

DEN Technical Support Center
Technical support services for D2L, lecture posting, course notes support, and exams.

DEN Exams
Support and coordinate homework and exams on D2L.

*Part of the Technical support team
One stop shop for all student services and inquiries.

Always feel free to reach out to me and I can direct you to the proper help or support. =)
“What services can my ASTE dept. advisor help me with?”
Department of Astronautical Engineering

- Unique pure-space-engineering department (established in 2004)
- Offers the full set of degrees in Astronautical Engineering (ASTE)
  - Bachelor of Science
  - Bachelor of Science Minor
  - Master of Science
  - Engineer
  - PhD
  - Graduate Certificate

- Among largest national programs in space engineering on Master’s level

- Mission: to provide forefront research and education in astronautical (space) engineering
Department of Astronautical Engineering
Interdisciplinary Collaborations

- Interdisciplinary collaborations with other USC programs/departments/schools
  - Systems Architecting and Engineering
  - Electrical Engineering
  - Mechanical Engineering
  - Information Sciences Institute (ISI), VSOE
  - Physics and Astronomy

- External collaborations
  - U.S. Universities (Harvard, UC Berkeley, U of Az., BU, U Mass., ...)
  - NASA centers (JPL, Goddard)
  - DoE National Labs (Los Alamos, Princeton Plasma Physics Lab)
  - R&D centers and institutes (Applied Physics Laboratory; Southwest Research Institute, ...)
  - Industry (Northrop-Grumman, Lockheed-Martin, Boeing, ...)
  - Foreign R&D centers and universities (Germany, Japan, ...)

USC Viterbi
School of Engineering
University of Southern California
SAE Program Overview

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

SAE programs housed in Astronautical Engineering Dept.

Main website: [https://sae.usc.edu/](https://sae.usc.edu/)

SAE Executive Director
Dr. Azad Madni

Email: Azad.Madni@usc.edu
Systems Architecting and Engineering

Degree Requirements
Master of Science in Systems Architecting and Engineering (MS SAE)

Requirements for Graduation: A total of 27 units (9 classes) with a 3.0 GPA. A maximum of 6 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 SAE Required Core Courses
- 3 units in SAE elective
- 3 units in the Technical Management Area (choose from specific list of courses)
- 6 units in the Technical Specialization Area (open to all Viterbi Grad courses)

Course Planning Tips:
- Create a course plan and send to me for review.
- SAE 549 is foundation course and recommended to be first SAE course taken.

MS SAE program catalogue: https://catalogue.usc.edu/preview_program.php?catoid=14&poid=17204&returnto=5360
SAE Master’s Program
Degree Requirements

Required Courses – 5 Courses (3 units each)

1. SAE 549 Systems Architecting.
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 560 Economic Considerations for Systems Engineering
   or ISE 460 Engineering Economy
SAE Master’s Program
Degree Requirements

SAE Elective – Pick 1 course (3 units)
Any SAE 500 course

Technical Management Area—Pick 1 course (3 units)
CE 569 Project Controls Units: 4
DSO 580 Project Management Units: 3
ISE 515 Engineering Project Management Units: 3
ISE 517 Modern Enterprise Systems Units: 3
ISE 544 Leading and Managing Engineering Teams Units: 3
ISE 562 Decision Analysis Units: 3
ISE 585 Strategic Management of Technology Units: 3
MOR 561 Strategies in High-Tech Businesses Units: 3
SAE 550 Systems Architecting and the Political Process Units: 3
SAE Master’s Program Degree Requirements

Technical Specialization Area – (6 units)

Courses are intended to complement the student’s prior education and experience toward becoming a well-rounded systems architect-engineer or architect-manager.

The courses should come from one Viterbi department.

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.


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
SAE Certificate Program
Degree Requirements

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: 1.5-2 years (2-3 courses per semester)
- Part-time students: 3-4 years (1-2 courses per semester)

Course Sequencing:
*SAE 549 first course taken, after that 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 of 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
D2L Login and Training

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.

First Time Logging in?

DEN@Viterbi Students: You must create a profile first before you can log in.

On-campus students: Profile is created automatically.

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

Log In Options

- USC NetID: Active users with a @usc.edu address can use their USC NetID login option. If this does not work, you may still use your original D2L credentials described below.

**USC NetID Login**

- D2L email account and password: Log on by D2L email account and password option below. Your D2L username is your FULL EMAIL ADDRESS.

Username *

Password *
DEN D-Clearance Request

Important reminders:

- Approval process takes 1-2 business days. To view the status of a request, click on “Check D-Clearance Status”
- 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.

All DEN courses require D-clearance.

For questions on D-Clearance status, contact den@vase.usc.edu
Questions?

Please submit your questions in the Q&A box
**ASTE Advising**

- Email: Luis Saballos - isaballo@usc.edu
- Office phone: (213)821-4234
- Please include USC ID number in emails.

  Advising Appointment Link: https://calendly.com/isaballosusc/usc-aste-sae-advising-appointment-luis-saballos

  Monday & Tuesday (on campus appointment available & zoom online)
  Wednesday-Friday (zoom online only)

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**VASE Advising**

Email: welcome@vase.usc.edu

Website: https://viterbigrad.usc.edu/

Virtual Walk-in Hours (Monday-Thursday, PST):
- 10:00 AM - 12:00 PM
## DEN CONTACT INFORMATION

**Location**: Olin Hall of Engineering (OHE), Rm. 106  
**Hours**: Mon. - Fri. 8:30 am - 5 pm (Pacific Time)  
[https://viterbigrad.usc.edu/academic-services/denviterbi-student-services/](https://viterbigrad.usc.edu/academic-services/denviterbi-student-services/)

<table>
<thead>
<tr>
<th>DEN@Viterbi Support</th>
<th>Contact Information</th>
<th>Staff</th>
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| Technical support, Desire2Learn training, Homework | dentsc@usc.edu  
213-740-9356 | Daniel Cueva |
| DEN d-clearance inquiries | den@vase.usc.edu | |
| Exams | denexam@usc.edu  
213-740-9356 | Shirley Schutt |
| VASE Advisor  
• General advisement  
• Policies & Procedures | den@vase.usc.edu | Andrea Mora, Andy Chen, William Wences |
Please help us by submitting the survey after you leave the meeting.

THANK YOU!