DEN@Viterbi ORIENTATION
Aerospace and Mechanical Engineering

Chrissy Franks
Director, AME Student Affairs

Susan Sath
Assistant Director, AME Student Affairs
Agenda

• Welcome to DEN@Viterbi & USC
• Advisor/Student Expectations
• Degree Requirements
• Department Policies, Procedures & Important Deadlines
• Desire2Learn Login & Training
• Advisement: DEN D-clearance
• DEN Contact Information
• Q & A
Welcome to DEN@Viterbi and USC!

AME Advising

Chrissy Franks
Director, AME Student Affairs
Ph.D. Advising

Susan Sath
Assistant Director, AME Student Affairs
M.S. advising
Email amegrad@usc.edu
“How do I succeed in the program?”

- Connect with peers
- Communicate with faculty
- AME Student Affairs
- Attend Events
- Know Deadlines
- Communicate with advisors
- Ask!
AME Student Affairs – What you can expect from us

We are here to guide and educate about university policies & degree requirements so you can make informed decisions.

• **Common questions in an advisement appointment**
  • Degree requirements & course selection
  • How to get involved in research
  • Student organizations
  • Academic adjustment and support (successes & challenges)

• **Communication expectations**
  • We reply within 24 business hours (48 during peak times)
  • You can sign up for an advisement appointment via myViterbi
Communication expectations

- Please include your USC ID in all emails
- Email us from your official USC email address
- When our emails require a response, please reply within 24-48 business hours
Aerospace & Mechanical Engineering – MS Programs

- MS in Aerospace Engineering
- MS in Mechanical Engineering
- MS in Aerospace & Mechanical Engineering (Computational Fluid & Solid Mechanics)
- MS in Aerospace & Mechanical Engineering (Dynamics and Control)
- MS in Mechanical Engineering (Energy Conversion)
- MS in Product Development Engineering
- MS in Aerospace Engineering/Engineering Management (Dual degree)
- MS in Mechanical Engineering/Engineering Management (Dual degree)

Degree Available online via DEN@Viterbi. Visit viterbigradadmission.usc.edu to confirm online course offerings.
**MS in Aerospace Engineering – Program Details**

*Program Requirements: Minimum of 27 units*

**Required Courses**
AME 525 | Engineering Analysis
11 units of AME 500 level course work
Remaining units can be selected from approved electives

**Optional Specializations** - A specialization can be selected from the following list
- Aerodynamics/Fluid Dynamics
- Aerospace Controls
- Aerospace Design
- Aerostructures
- Computational Fluid Dynamics
- Propulsion

Degree Available online via DEN@Viterbi. Visit viterbigradadmission.usc.edu to confirm online course offerings.
**Program Requirements:** Minimum of 27 units

**Required Courses**
AME 525 | Engineering Analysis
11 units of AME 500 level course work
Remaining units can be selected from approved electives

**Optional Specializations** - *A specialization can be selected from the following list*

- Advanced Manufacturing
- Combustion
- Design
- Dynamics & Controls
- Energy Conversion
- Fluid Dynamics
- Heat Transfer
- Mechanics & Materials
- Solid & Structural Mechanics

Degree Available online via DEN@Viterbi. Visit viterbigradadmission.usc.edu to confirm online course offerings.
Program Requirements: Minimum of 27 units

Required Core Courses (19 units)
- AME 509 | Applied Elasticity OR CE 507
- AME 525 | Engineering Analysis
- AME 530a | Dynamics of Incompressible Fluids
- AME 535a | Introduction to Computational Fluid Mechanics
- CE 529 | Finite Element Analysis

Core Elective Fluid/Solid Dynamics (3-4 units) – One course. Sample courses include:
- AME 511 | Compressible Gas Dynamics
- AME 506 | Continuum Mechanics
- AME 521 | Engineering Vibrations II

Core Elective Numerical Methods (3-4 units) - One course. Sample courses include:
- AME 535b | Introduction to Computational Fluid Mechanics II
- CE 529b | Finite Element Analysis
- MASC 575 | Basics of Atomistic Simulation of Materials
- MASC 576 | Molecular Dynamics Simulations of Materials and Processes

Degree Available online via DEN@Viterbi. Visit viterbigradadmission.usc.edu to confirm online course offerings.
Program Requirements: Minimum of 27 units

Required Courses (24 units)
- AME 521 | Engineering Vibrations II
- AME 522 | Nonlinear Vibrations
- AME 524 | Advanced Engineering Dynamics
- AME 525 | Engineering Analysis
- AME 541 | Linear Control Systems II
- AME 552 | Nonlinear Control Systems

Core Elective Courses (3 units)
Remaining units approved 400 or 500 level elective courses. Elective courses may be from AME or other Engineering Departments.
Program Requirements: Minimum of 27 units

Required Core Courses (14 units)
- AME 513a | Fundamentals and Applications of Combustion
- AME 525 | Engineering Analysis
- AME 577 | Survey of Energy and Power for a Sustainable Future
- AME 578 | Modern Alternative Energy Conversion Devices

Approved Elective Courses (7-8 units)
- AME 436 | Energy and Propulsion
- AME 513b | Fundamentals and Applications of Combustion
- AME 515 | Advanced Heat and Mass Diffusion
- AME 516 | Convection Processes
- AME 530a | Dynamics of Incompressible Fields

Remaining Units Approved 400 or 500 level courses.
Program Requirements: Minimum of 27 units

**Required Core Courses (6 units)**
- ISE 501 | Innovative Conceptual Design for New Product Development
- ISE 545 | Technology Development and Implementation

**Required Core Specialization Track**
*Students will choose one area of specialization (track):*

**Product Development Systems Required Courses (6 units)**
- *Advised by ISE Department*
  - ISE 515 | Engineering Project Management
  - ISE 544 | Management of Engineering Teams

**Product Development Technology Required Courses (7 units)**
- *Advised by AME Department*
  - AME 503 | Advanced Mechanical Design
  - AME 525 | Engineering Analysis

**Core Electives (6 units)** Selected from pre-approved list for each track.

**Remaining Units Approved 400 or 500 level courses.**
Dual Degree Program Offerings

Dual Degree Programs

• MS in Aerospace Engineering/Engineering Management
• MS in Mechanical Engineering/Engineering Management

• A minimum of 48 units is required
• A minimum of 18 units must be graduate-level course work in Aerospace & Mechanical Engineering, approved by a graduate advisor
• Remaining 30 units must be approved by the ISE advisor

Degree Available online via DEN@Viterbi. Visit viterbigradadmission.usc.edu to confirm online course offerings.
AME Department Policies Procedures & Tips

• Degree Requirements ([ame.usc.edu](ame.usc.edu))

• Change of Majors
  • Within AME, students are eligible to change their major after completing their first semester with a 3.0 or higher
  • Outside of AME, admission is determined by the department who owns the program

• AME 525
  • Only required class for general MS in AE & MS in ME
  • Offered every semester
    • Summer offering is a fast-paced six-week session
AME Department Policies Procedures & Tips

• Refer to the Schedule of Classes for planning purposes
  • http://classes.usc.edu
  • View archived schedules to identify which courses are typically offered in each semester

• Prerequisite Waivers
  • Email amegrad@usc.edu for AME courses
    *if you completed the equivalent during undergrad, include a transcript and course description for the course completed

• Transfer Credit - up to 6 units
  • Courses need to first be evaluated by the articulation office (submit your transcripts) degree-progress/graduatetransfercredit.html
  • Once the course is available for graduate credit on your Transfer Credit Report, you can submit the course description or syllabus to our department for review

• Linear Algebra Tutorial
  • https://viterbigrad.usc.edu/workshops-tutorials/
UNIVERSITY CALENDAR – Spring 2021 (Grad. Level)
Visit viterbigrad.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/
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@vase.usc.edu](mailto:den@vase.usc.edu)
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/](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>
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<td>Bianca Richter</td>
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<td>Desire2Learn training,</td>
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<td>Homework</td>
<td>213-740-9356</td>
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<td>DEN d-clearance inquiries</td>
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<td>Patty Rinehart</td>
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<td>• General advisement</td>
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<td>• Policies &amp; Procedures</td>
<td>213-740-0116</td>
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THANK YOU!

HAVE A GREAT SEMESTER!
FIGHT ON!

A recording of this online orientation and this presentation will be available for viewing and download on the VASE website.
https://viterbigrad.usc.edu/academic-services/new-student-information/