



# DEN@Viterbi ORIENTATION

## Aerospace and Mechanical Engineering

*Brian Zimmerman*  
*Assistant Director, AME Student Affairs*



## Agenda

- Welcome to DEN@Viterbi & USC
- Important Dates & Deadlines
- Degree Requirements
- Department Policies, Procedures & Tips
- Desire2Learn Login & Training
- Advisement: DEN D-clearance
- DEN Contact Information
- Q & A



# Welcome to DEN@Viterbi and USC!

## AME Advising

### Natalie Guevara

*Director, AME Student Affairs*

*PhD advising*

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### Brian Zimmerman

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# UNIVERSITY CALENDAR – SPRING 2020

JAN 10	Last day to register and pay without late fee
JAN 13	Spring semester classes begin
JAN 13-17	Late registration and change of schedule
JAN 20	MLK Day, University Holiday
JAN 31	Deadline to purchase or show proof of health insurance
JAN 31	Last day to drop a class <u>without</u> a mark of "W," except for Monday-only classes, <u>and</u> receive a 100% refund
JAN 31	Last day to register and add classes
JAN 31	Last day to purchase or waive tuition refund insurance



## UNIVERSITY CALENDAR – SPRING 2020 (continued)

- FEB 4 Last day to drop a Monday-only class without a mark of “W” and receive a 100% refund or change to Pass/No Pass or Audit
- FEB 17 President's Day, University holiday
- FEB 28 Last day to drop a course without a mark of “W” (no refund)
- MAR 15-22 Spring recess
- APR 3 Last day to drop a class with a mark of “W”
- MAY 1 Spring semester classes end
- MAY 6-13 Final examinations



# Program Review

- Master of Science in Mechanical Engineering (MSME)
- Master of Science in Aerospace Engineering (MSAE)
  
- Master of Science in Mechanical Engineering – Energy Conversion (MSMEEC)
- Master of Science in AME – Dynamics and Control (MSAMDC)
- Master of Science in AME – Computational Fluid and Solid Mechanics (MSAMFS)
- Master of Science in Product Development Engineering – Technology Track (MSPDE)
- Dual Degrees
  - MS in Mechanical Engineering/MS Engineering Management (MSMEMT)
  - MS in Aerospace Engineering/MS Engineering Management (MSAEMT)



# Master of Science in Mechanical Engineering (MSME) Master of Science in Aerospace Engineering (MSAE)

**Requirements for Graduation Without Thesis**, 27 units total with 3.0 GPA overall:

- AME 525 (4 units)
- 15 units of coursework in AME (including AME 525)
  - Cross-listed courses count as AME
- 18 units minimum in 500-level coursework
  - No more than 9 units at 400-level

**List of recommended classes by areas of interest are here:**

<https://ame.usc.edu/academics/master-science-mechanical-engineering/>

<https://ame.usc.edu/academics/master-science-aerospace-engineering/>



# Master of Science in Mechanical Engineering (MSME)

## Courses by specialization

### Thermal and Fluid Sciences

- AME 513a Fundamentals and Applications of Combustion
- AME 515 Advanced Heat and Mass Diffusion
- AME 530a Dynamics of Incompressible Fluids

### Dynamics and Controls

- AME 521 Engineering Vibrations II
- AME 522 Nonlinear Dynamical Systems, Vibrations, and Chaos
- AME 524 Advanced Engineering Dynamics





# Master of Science in Mechanical Engineering (MSME)

## Courses by specialization

### Design

- AME 541 Linear Control Systems II
- SAE 549 System Architecting ↔
- AME 451 Linear Controls Systems I (ELECTIVE)

### Mechanics and Materials

- MASC 551 Mechanical Behavior of Engineering Materials ↔
- MASC 560 Fatigue and Fracture ↔

### Energy

- AME 514 Applications of Combustion and Reacting Flows
- AME 581 Intro to Nuclear Engineering



# Master of Science in Aerospace Engineering (MSAE)

## Courses by specialization

### Aerospace Control

- AME 541 Linear Control Systems II
- AME 544 Computer Control of Mechanical Systems
- AME 545 Modeling and Control of Distributed Dynamic Systems
- AME 451 Linear Controls Systems I (ELECTIVE)

### Aerospace Design

- AME 527 – Elements of Vehicle and Energy Systems Design
- ASTE 520 – Spacecraft System Design (ELECTIVE)



# Master of Science in Aerospace Engineering (MSAE)

## Courses by specialization

### Aerospace Structures

- AME 521 Engineering Vibrations II
- CE 507 Mechanics of Solids I ↔
- AME 403 (ELECTIVE) – prereq AME 204
- AME 420 (ELECTIVE) – prereq MATH 245



# Master of Science in Aerospace Engineering (MSAE)

## Courses by specialization

### Computational Fluid Dynamics

- AME 511

### Aerodynamics/Fluid Dynamics

- AME 511
- AME 516 – prereq AME 457

### Propulsion

- AME 511
- AME 514 – rec prep AME 513
- AME 436 (ELECTIVE) – prereq AME 310 and (CE 309 or AME 309)



# Master of Science in Mechanical Engineering – Energy Conversation (MSMEEC)

**Requirements for Graduation Without Thesis**, 27 units total with 3.0 GPA overall:

- AME 525 (4 units)
- Required core courses (16 units)
- Approved Energy Conversion electives (7-8 units)

## Required Courses

- AME 430 Thermal Systems Design (3 units)
- AME 577 Survey of Energy and Power for a Sustainable Future (3 units)
- AME 578 Modern Alternative Energy Conversion Devices (3 units)
- CE 501 Construction Practices (4 units)
- SAE 515 Sustainable Infrastructure Systems (3 units)



# Master of Science in Aerospace and Mechanical Engineering – Dynamics and Control (MSAMDC)

**Requirements for Graduation Without Thesis**, 27 units total with 3.0 GPA overall:

- AME 525 (4 units)
- Required core courses (20 units)
- Approved 400- or 500- level elective course (3-4 units)

## Required Courses

- AME 521
- AME 522
- AME 524
- AME 541
- AME 552



# Master of Science in Aerospace and Mechanical Engineering – Computational Fluid and Solid Mechanics (MSAMFS)

**Requirements for Graduation Without Thesis**, 27 units total with 3.0 GPA overall:

- AME 525 (4 units)
- Required core courses (13-16 units)
- Core Elective in Fluid/Solid Dynamics (1 course = 4 units)
- Core Elective in Numerical Methods (1 course = 3-4 units)

## **Courses**

- AME 525
- AME 530a
- AME 535a
- CE 507
- CE529a



# Master of Science in Product Development Engineering – Technology Track (MSPDE)

**Requirements for Graduation Without Thesis**, 27 units total with 3.0 GPA overall:

- AME 503 and ISE 545 (6 units)
- Required Technology Track courses (6 units)
- Required Technology Technical Elective courses (6 units)
- Approved 400- or 500-level electives (8-9 units)

## Required Courses

- AME 503
- ISE 501/AME 501 – TECHNOLOGY TRACK
- AME 525 – TECHNOLOGY TRACK
- ISE 545 – TECHNOLOGY TRACK





## **DUAL DEGREE:**

**MS Mechanical Engineering & MS Engineering Management**

**MS Aerospace Engineering & MS Engineering Management**

**Requirements for Graduation Without Thesis**, 48 units total with 3.0 GPA overall:

- AME 525 (4 units)
- ISE 500, ISE 515, ISE 544, and ISE 561 (12 units)
- Approved AME graduate-level course work (11-12 units)
- Approved ISE graduate-level course work (6 units)
- Approved 400- or 500-level elective course work approved by AME/ISE (14-15 units)
- No more than 15 units at 400-level may be taken as degree credit

### **Spring 2020 Courses**

- AME 525
- ISE 500



# AME Department Policies, Procedures & Tips

- Consider only taking one course in your first semester
- Department Worksheets
  - [ame.usc.edu](http://ame.usc.edu) - Current Students - Graduate Student Resources
- Check and READ your USC email regularly!
  - Always include your USC ID number!
- Change of Majors
  - Must wait until after you complete your first semester with 3.0.
- AME 525
  - Only required class for general MS.AE and MS.ME
  - Offered every semester
    - Summer offered as fast-paced six-week sessions



# AME Department Policies, Procedures & Tips

- Refer to the Schedule of Classes for planning purposes
  - <http://classes.usc.edu>
- Cross-listed courses
  - Count as AME courses, not outside the department
- Prerequisite Waivers
  - Email [amegrad@usc.edu](mailto:amegrad@usc.edu) for AME courses
- Transfer Credit - up to 6 units
  - <https://arr.usc.edu/services/degree-progress/graduatetransfercredit.html>
- Research as DEN student
- Linear Algebra Tutorial
  - <https://viterbigrad.usc.edu/workshops-tutorials/>



# DESIRE2LEARN LOGIN & TRAINING

<https://courses.uscden.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.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.



Student FAQ DEN@Viterbi Tools

29071D-AME541\_20163  
29073D-AME541(DIS)\_20163  
29092D-AME578\_20163  
29093D-AME581\_20163  
29095D-AME588\_20163  
11288D-ARCH511\_20163  
29157D-ASTE470\_20163  
Please Select a Course

DEN@Viterbi Tools

**Enrollments**

- Request D-Clearance
- Check D-Clearance Status
- DEN Terms of Service

**Profile**

- Update Profile

To begin D-Clearance, Please select a term to apply for D Clearance

Summer 2019 Select Term

1. Login to DEN Desire2Learn: <http://courses.uscdcn.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/>

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	<a href="mailto:ptrinida@usc.edu">ptrinida@usc.edu</a> 213-740-0116	Patty Rinehart
<ul style="list-style-type: none"><li>• General advisement</li><li>• Policies &amp; Procedures</li></ul>		



**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/>*