

# Smead Aerospace Engineering Sciences University of Colorado Boulder



## Bachelor's- Accelerated Master's (BAM) Info Session

March 7, 2025  
3:00 pm, AERO 120



# AGENDA

## BAM PROGRAM OVERVIEW

What is BAM? What are the benefits?  
What options are there?

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## BAM PROGRAM ADMISSIONS

Admissions requirements, how to apply,  
timeline, grad course enrollment

## BAM PROGRAM LOGISTICS

How BAM works, double-counting  
courses, etc.

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## MASTER'S DEGREE OPTIONS

MS, ProMS, Focus Areas, Degree and  
Graduation requirements

## RESOURCES

Graduate Student Handbook, Funding,  
Resource links, Contact Info

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## Q & A

Time for you to ask any questions

# 01

## BAM PROGRAM OVERVIEW

What is BAM? What are the benefits? What options are there?



# WHAT IS THE BAM PROGRAM?

- Receive a bachelor's and master's degree in a shorter period of time.
- Receive a master's degree at a lower cost.
- Short application. No GRE, no letters of recommendation, no application fee required.
- Continue working with your established faculty mentors.

# WHAT THE BAM PROGRAM IS NOT

- **The BAM Program is not necessarily a 5-year program**
  - For some students, their goal is to complete their MS in one year, but it is common for BAM students to spread their degree out over three semesters
- **It is not an extension of *undergrad* advising and campus services**
  - You are responsible for meeting all administrative deadlines
  - You are expected to use campus resources and problem-solve with minimal guidance and supervision
    - Campus resources are different for graduate students, so be aware of that

# THERE ARE TWO AES-RELATED BAM PROGRAM OPTIONS YOU CAN CHOOSE FROM:

## AES BS & MS BAM Program



- *What this presentation is about!*
- Offered through the Smead AES department (ASEN)
- Master of Science in Aerospace Engineering Sciences
- 3.50 GPA to apply

## AES BS & ME BAM Program



- Offered through the Lockheed Martin Engineering Management Program (EMEN)
- Master of Engineering in Engineering Management
- 3.00 GPA to apply
- Contact: [emp@colorado.edu](mailto:emp@colorado.edu)



02

# BAM PROGRAM ADMISSIONS

Admissions requirements, how to apply, timeline,  
grad course enrollment




# AES BAM ADMISSION REQUIREMENTS

- **Be in the spring semester of your junior year** (enrolling in Senior Projects I)
  - *Note: if pursuing an additional/double-degree, you must apply in the spring before your final year when both degrees will be completed*
- **GPA requirements\* as of June 15** (including spring semester grades of your junior year):
  - Have a **cumulative GPA of 3.50 or higher**
  - Have a **GPA of 3.50 or higher in ASEN coursework**
    - *ASEN coursework is any ASEN 2000-level course and above (excluding ASEN 3036 & 3046)*
- Have no MAPS deficiencies

*\*The AES BAM Program's only admission requirement is a 3.50 GPA or higher in both your cumulative and ASEN coursework—there is no rounding because of this.*

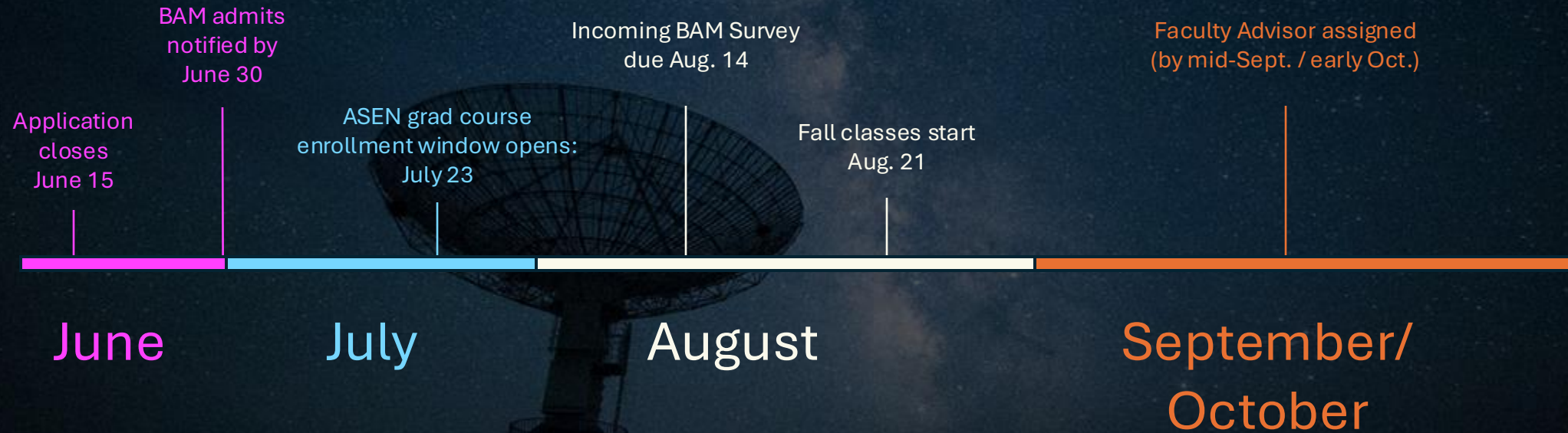


# AES BAM PROGRAM APPLICATION PROCESS

- April 15 – Application opens
  - Click on the  button on the [AES BAM Program page](#)
  - NOTE: AES does NOT require or accept any supporting documentation
- June 15 – Application closes
  - Late applications will be denied
  - Admission decisions will be sent by June 30
  - Please read comments/all materials upon receiving your decision information

Visit the [AES BAM Program page](#) for more information and a link to the application

# TIMELINE FOR INCOMING UNDERGRADUATE BAM STUDENTS





# SUMMER TO-DO ITEMS FOR INCOMING BAM UNDERGRADUATES

**Upon admission to BAM / over summer *before* fall semester of senior year:**

1. Read BAM program admission email and letter carefully.
2. Enroll in graduate classes if desired (*enrollment access opens for new BAM undergraduates on July 23*).
3. Complete the **New Undergraduate BAM Student Survey – Fall 2025** to confirm your intended plan of study for your graduate degree by August 14.

*Detailed instructions will be included in BAM admissions notification email*



# ENROLLING IN GRADUATE COURSES FOR FALL SEMESTER

- **Newly admitted (over summer) BAM undergraduates:**
  - You will have access to self-enroll or waitlist in graduate-level ASEN courses beginning on **Wednesday, July 23 @ 12:01am**
    - Note that undergraduate enrollment is closed from 5/22 – 7/22, **so be ready to enroll on 7/23!**
- **Undergraduates not in BAM:**
  - Email the instructor of the course requesting permission to enroll
  - Forward the instructor's permission email to [aes-enrollment-help@colorado.edu](mailto:aes-enrollment-help@colorado.edu) with the following information:
    - Your Student ID#, course number, and section number
    - Our enrollment team will begin enrolling or waitlisting undergraduates in graduate courses before the start of fall classes

# FUTURE PLANNING FOR INCOMING BAM UNDERGRADUATES

## Early spring semester / January of senior year:

- The following forms must be submitted early in the final semester of your BS degree prior to February 1:
  1. [Master's Continuation Form](#)
    - Where you will indicate which semester you plan to start your graduate degree
      - Must be within three semesters of completing your BS: summer, fall, or spring
  2. [BAM Program Supplement Form](#)
    - Where you will indicate what BAM-eligible courses taken as an undergraduate that you would like to use for the master's degree and how they will be used

*Instructions will be sent in January, prior to the deadline*



# WHAT IF I'M NOT 100% SURE I WANT TO (OR CAN) CONTINUE ON TO GRADUATE SCHOOL?

*You can **discontinue the BAM Program** any time during your senior year or right up until when you would begin your graduate degree.*

- It is well worth applying to BAM if you meet the GPA requirements 😊





WHAT IF I DON'T GET INTO BAM  
OR MISSED THE BAM APPLICATION DEADLINE?

# APPLY FOR “REGULAR” GRADUATE ADMISSIONS TO AES

- You are *strongly* encouraged to apply via regular admissions!
  - Application opens July 1
  - Make sure you are aware of application deadlines:
    - **Fall Admission** – December 1 (that’s during fall semester of senior year)
    - **Spring Admission** – October 1 (after you’ve graduated with your BS)
- Requirements:
  - Undergraduate degree in engineering and a competitive GPA
  - Statement of Purpose / personal statement
  - 3 letters of recommendation
  - Transcripts
  - Resume
  - Currently the GRE is NOT required/accepted for admission

Visit the [AES Graduate Admissions page](#) for more detailed admissions information



# BAM vs. “REGULAR” ADMISSIONS FOR AES STUDENTS

## AES BAM Program:

- Only cumulative and ASEN GPA considered
  - Very short application, no personal statement, no letters of recommendation needed/accepted
- Up to 12 total credits / 4 courses can be used for MS degree taken as undergraduate
  - Of the 12 credit hours, 6 can double-count towards both BS and MS degree
  - Courses used for BAM must have a cumulative GPA of 3.00 or higher

## “Regular” admissions:

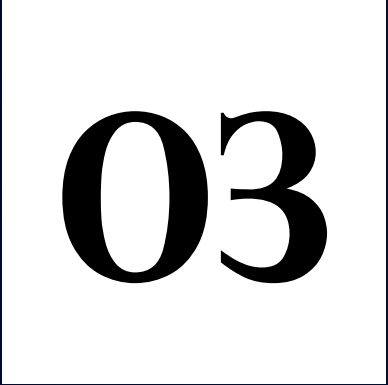
- More holistic applicant review by committee:
  - Entire GPA considered, personal statement, three letters of recommendation
- Up to 9 credit hours / 3 courses\* can be used for MS degree taken as undergraduate *as long as*:
  - Courses are NOT used for any BS degree or Minor requirements
  - Courses have a “B” or higher grade

*\*Other institutions can vary on the number of credits/courses that they allow to transfer in to a graduate degree program and may have different minimum grade requirements, so always inquire with them if unsure*



*Don't forget there is a 3rd option:*

*Consider applying to the  
**Engineering Management  
BS-ME BAM program!***



03

# BAM PROGRAM LOGISTICS

How BAM works, double-counting courses, etc.

## APPLYING UNDERGRADUATE COURSEWORK TOWARDS GRADUATE DEGREE VIA BAM

- You may take **up to and including (12) credit hours** while an undergrad which can later be used toward the master's degree
  - Of the **(12) credit hours**, **(6) may be double-counted** towards both the BS degree and the MS degree
- Courses you can consider:
  - 5000+ level / graduate courses in ASEN or other engineering, math, and science departments
  - You can also consider up to (6) credit hours taken at the 4000 level in approved non-ASEN engineering, math, and science departments (see Section 6.1 in the [Graduate Student Handbook](#) for a list of approved departments)



# APPLYING UNDERGRADUATE COURSEWORK TOWARDS GRADUATE DEGREE VIA BAM

## Recommended ASEN graduate courses for undergrads:

- Visit the AES BAM Program page and review this table towards the bottom of the page (*note the Focus Area tabs on the left*)
  - Other graduate courses of interest can also be considered for enrollment, but if you have any questions or concerns regarding a course, reach out to the instructor

Recommended ASEN Graduate Courses (by Focus Area) <i>for BAM undergrads!</i>	
Astrodynamics and Satellite Navigation (ASN)	<b>Astrodynamics and Satellite Navigation (ASN)</b> <ul style="list-style-type: none"><li>• 5010 - Attitude Dynamics and Control (Spring)</li><li>• 5050 - Astrodynamics <i>or</i> 5052 – Analytical Astrodynamics (Fall, Spring)</li><li>• 5044 - Statistical Estimation for Dynamical Systems (Spring)</li><li>• 5090 - Introduction to GNSS (Fall)</li></ul> <p>(i.e. any of the ASN core classes)</p>
Autonomous Systems (AUT)	
Bioastronautics (BIA)	
Fluids (FSM)	
Structures and Materials (FSM)	
Remote Sensing, Earth and Space Sciences (RSS)	

## APPLYING UNDERGRADUATE COURSEWORK TOWARDS GRADUATE DEGREE VIA BAM

Of the **12 credit hours** that can apply towards master's degree requirements, courses can be:

**Double-  
counting**

*(6 credit hours max)*

*and/or*

**MS-only**

*(up to 12 credit hours if  
not double-counting)*

*\*Note this benefit of the BAM Program is optional (not required)  
Not every student is able to fit in BAM-eligible courses during their BS degree*

*Review the [AES BAM Program page](#) and the institutional [BAM Program Policy page](#) for more information*



# APPLYING UNDERGRADUATE COURSEWORK TOWARDS GRADUATE DEGREE VIA BAM

## Double-counting:

- Up to and including 6 credit hours / 2 courses may **double-count** towards both the bachelor's and master's degrees
  - Typically, **Technical Electives**, **Free Electives**, and/or courses for any **Minor(s)** if pursuing
  - **Double-counting** is only a CU Boulder BAM Program benefit!
    - **Double-counted** courses are *NOT eligible* for transfer to any graduate degree program whether at CU or elsewhere – *even if the courses are at the graduate / 5000+ level!*

Review the [AES BAM Program page](#) and the institutional [BAM Program Policy page](#) for more information

## APPLYING UNDERGRADUATE COURSEWORK TOWARDS GRADUATE DEGREE VIA BAM

### MS-only:

- Courses considered “extra” and NOT applying towards your BS degree or any Minor requirements are considered **MS-only** courses
- If *NOT* **double-counting** any courses, up to all of the allowed 12 credit hours / 4 courses would be considered **MS-only** courses
- **MS-only** courses *are eligible* for transfer to most graduate degree programs including CU with a “B” minimum grade

Review the [AES BAM Program page](#) and the institutional [BAM Program Policy page](#) for more information



# APPLYING UNDERGRADUATE COURSEWORK TOWARDS GRADUATE DEGREE VIA BAM

*An example of how this would look in a BS Degree Audit:*

**Double-counting** courses will show up here (or in Free Electives or in a Minor section). – Your undergrad advisor may need to edit your Degree Audit to ensure it looks correct.

*\*Note only 2 courses / 6 credit hours maximum can **double-count**!*

**MS-only** courses will show up here once enrolled in graduate courses. – Courses listed in this section are **NOT** applying to BS degree / any Minor requirements.

*\*Can have up to 4 courses / 12 credit hours here if **NOT** double-counting any courses*



## Technical Electives (15 hours)

Technical Electives are select 3000, 4000 and 5000-level math, science and engineering courses (with the exception of CSCI, ECEN, and PHYS where select 2000-level courses are also accepted).

FA20	CHEM3311	4.0	B+	Organic Chemistry 1 Approved Substitution
FA20	CHEM3321	1.0	B	Lab/Organic Chemistry 1 Approved Substitution
SP21	CHEM3331	4.0	A-	Organic Chemistry 2
SP21	CHEM4521	3.0	A	PChem for Engineers Course approved by dept. >>MATCHED AS: PEN ASEN PAE
FA22	ASTR3710	3.0	A	Form & Dyn of Planet Sys

*Scroll further down in your Degree Audit to see this part*



## 5000 Level Coursework

Advisor may apply courses according to program policy.

FA23	ASEN5158	3.0	A	Space Habitat Design
SP24	ASEN5016	3.0	***	Space Life Sciences
SP24	ASEN5148	3.0	***	Spacecraft Design

## APPLYING UNDERGRADUATE COURSEWORK TOWARDS GRADUATE DEGREE VIA BAM

### Grade info to BE AWARE of

- BAM undergraduates must have at the end of senior year:
  - **3.0 or higher cumulative undergraduate GPA** to be eligible to move into graduate student status
  - **3.0 or higher cumulative GPA for all the courses being used for BAM**
    - **Note:**
      - “B-” or higher grade is needed to meet graduate degree requirements (but be mindful of that required 3.0 cumulative GPA!)
      - “B” or higher grade is required if pursuing a graduate certificate

*→ Thus, it is safest to aim for a “B” or higher grade always!*



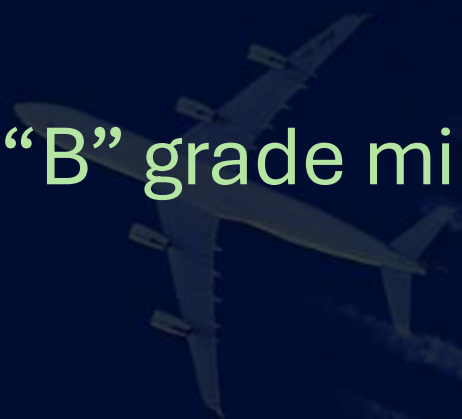
## APPLYING UNDERGRADUATE COURSEWORK TOWARDS GRADUATE DEGREE VIA BAM

### More grade info to BE AWARE of

- Any course(s) you take for BAM as an undergraduate will apply towards your *undergraduate* GPA
- BAM courses' credits (*not grades*) are what will be eligible to count towards master's degree requirements
- Your *Graduate* GPA will begin after you complete your first semester as an official graduate student

## MAYBE NOT BAM, BUT IF GRAD SCHOOL IS YOUR FUTURE PLAN

- ✓ Ensure any graduate courses taken are NOT used to meet any undergraduate degree or minor requirements
  - i.e., ensure courses are NOT **double-counting**
- ✓ Earn a “B” grade minimum always!





# 04

## AES MASTER'S DEGREE OPTIONS

MS, ProMS, Focus Areas, Degree and  
Graduation Requirements

# TWO MASTER'S OPTIONS FOR AES

You will choose *one* of these master's degree options on the BAM Intent Application:

“Traditional” Master’s

**MS**

*or*

**ProMS**

Professional Master’s

\*Be aware you are allowed to change to/from one degree option to the other *ONE TIME* after becoming a graduate student

# MS AND PROMS COMMON DEGREE REQUIREMENTS

**Both the MS and ProMS degrees require 30 total credit hours (10 courses)**

- **Of the 30 total credit hours:**
  - 24 credit hours / 8 courses must be at the 5000 level or above
    - Remember: up to 6 credit hours / 2 courses can be at the 4000 level from approved non-ASEN departments
  - 18 credit hours / 6 courses must be ASEN courses (EMEN 5405 counts as ASEN)
- **Remember:**
  - *What you select to use for BAM (up to 12 credit hours) contributes to the 30 required credit hours*
- **Grades must be a “B-” or higher to meet graduate degree requirements but keep in mind:**
  - Courses going towards a graduate certificate must have a “B” or higher grade
  - Grades “C+” or lower, Pass/Fail, and No Credit DO NOT count towards the graduate degree (but a letter grade will still impact your GPA)
- **Maintain a 3.0 cumulative Graduate GPA while a graduate student**

**See the [Graduate Student Handbook](#) for more detailed information**



# TRADITIONAL MASTER'S DEGREE (MS)

**As part of the 30 required credit hours for the MS degree, students must:**

- 1. Choose a Focus Area (ASN, AUT, BIO, FSM, or RSESS) and complete Focus Area-specific curriculum**
- 2. Choose one of the MS graduation requirement options:**
  - MS thesis
  - Complete a Certificate – *all certificate course grades must be a “B” or higher*
    - You can consider an [AES-related Certificate](#) or can pursue one in another department/program. See the most current [Graduate Student Handbook](#) Certificate section for more info.
  - Course-based option (for AUT and FSM only)

# FOCUS AREAS

## Aerodynamics and Satellite Navigation (ASN)

*Lead: Prof. Jade Morton*

## Autonomous Systems (AUT)

*Lead: Prof. Nisar Ahmed*

## Bioastronautics (BIO)

*Lead: Prof. Jim Nabity*

## Fluids, Structures, and Materials (FSM)

*Lead, Fluids: Prof. Hisham Ali*

*Lead, Structures & Materials: Prof. Maryam Shakiba*

## Remote Sensing, Earth & Space Sciences (RSESS)

*Lead: Prof. Sean Peters*

Explore more in the “Research Focus Areas” section at the bottom of our homepage: <https://www.colorado.edu/aerospace/>

# PROFESSIONAL MASTER'S DEGREE (ProMS)

- **Designed for working professionals**
- **Highly customizable curriculum with no Focus Area-specific requirements**
  - Completion of a Certificate is an option if desired (not required)
  - Thesis option is *NOT* available
- **Different tuition structure**
  - See “Tuition & Fee Rate Sheets” for the ProMS options on the “Resources” slide of this presentation
- **ProMS students are eligible only for hourly or salary campus positions, not for TA or RA opportunities**
  - TF (Teaching Facilitator) positions in our department are possible!



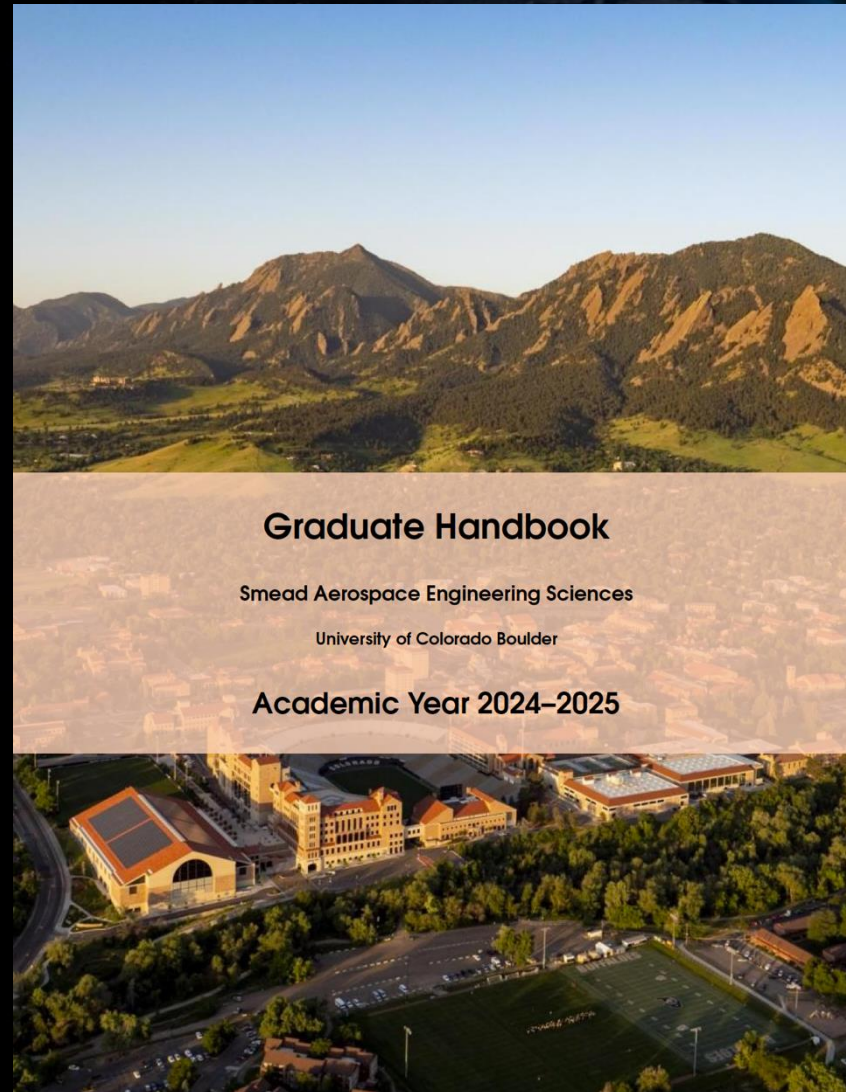
The background of the slide is a high-contrast, dark image of the Earth as seen from space. The Americas are visible, with city lights glowing against the dark landmasses. The blue of the oceans is also visible. The overall tone is dark and professional.

# 05

## RESOURCES

Graduate Student Handbook, Funding,  
Resource links, Contact info

FIND ALL THIS INFORMATION AND MORE IN THE GRADUATE STUDENT HANDBOOK



# FUNDING

- **Master's degrees are self-funded**
  - Student is financially responsible for tuition and fees
  - Funding could be via private funds, financial aid, fellowships or scholarships
  - For more funding information, check out the following resources:
    - [AES Funding Your Master's/PhD page](#)
    - [Graduate School's Funding page](#)
    - [Office of Financial Aid's Aid for Graduates & Professional Students page](#)
- **Teaching/Course Facilitator (TF) opportunities:**
  - Positions available for MS & ProMS students – **BAM students are in high demand!**
  - Not all positions offer tuition waivers (rare for MS students), most are salary or hourly
  - ProMS students can only take hourly/salary positions (like TF positions)
  - Note the AES only offers TA positions to PhD students. Other departments may consider MS students for TA positions, so you can certainly inquire with them!

*Department newsletters / announcements advertise opportunities for funding when available*



# TIPS AND ADVICE FOR GRAD STUDENTS

~FROM PROF. HOLZINGER, FORMER ASSOC. CHAIR FOR GRADUATE STUDIES

## Do

- Treat your coursework like a job!
- Take classes in what you're really interested in
- Take responsibility for your own learning & degree plan
- Schedule your work time carefully
- Make some friends!
- Take at least one full day off each week

## Don't

- Assume this will be like the undergrad program
- Assume that faculty will spell everything out
- Work a job or research if you're taking 4 classes
- Related: try not to take 4 grad classes in one semester!
- Forget your sense of curiosity!

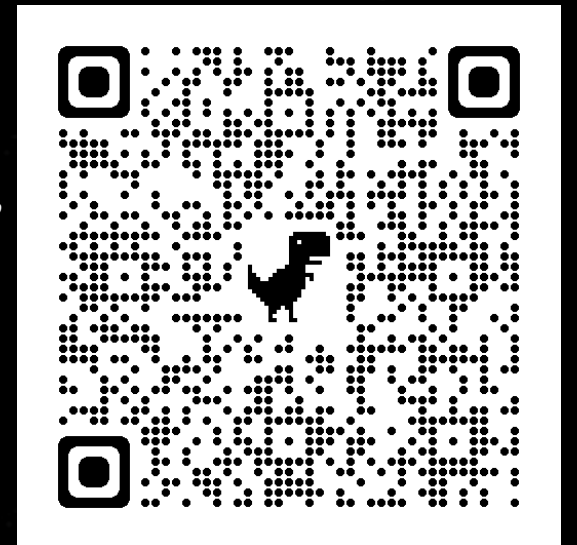
## CONTACT INFO & OFFICE HOURS FOR BAM PROGRAM GRADUATE ADVISING

**Best way to reach me is through email:**

[maureen.craig@colorado.edu](mailto:maureen.craig@colorado.edu)

### **Advising for prospective BAM students:**

- Graduate advisors use MS Bookings (not Buff Portal Advising) for scheduling appointments
  - **Maureen's appointment link:** [Book an Advising Appointment](#)
    - In the "SELECT A SERVICE" section at the top, click either "Virtual /Zoom..." or "In-person (or Zoom)..." to view open appointments days and times.



# RESOURCES

- [Aerospace Engineering's BAM Program \(BS & MS\) page](#)
- [Engineering Management's BAM Program \(BS & ME\) page](#) – contact [emp@colorado.edu](mailto:emp@colorado.edu) for info
- [“Regular” Admissions for Aerospace Engineering Graduate Programs page](#)
- [Graduate Student Handbook](#)
- [Graduate School Funding](#)
  - [Aid for Graduate & Professional Students](#)
  - [AES Funding Your Master's/PhD](#)
- [Tuition & Fee Rate Sheets](#) (2025/26 rates will be available after May 1)
  - Click on the most current academic year and scroll down to :
    - “Graduate” for MS
    - “Professional Masters” for ProMS
- BS graduation and BAM program required items
  - Will complete in your final BS semester--instructions will be sent to you in **January of senior year** instructing you to:
    - [Apply to graduate in Buff Portal](#) (with your BS)
    - Submit [Master's Continuation form](#) (where you confirm when you will start your graduate program)
    - Submit [BAM Supplement form](#) (where you indicate the courses taken as an undergrad that you want to use for BAM and how you will use them)
- [Academic Calendar](#)



# THANKS!

Does anyone have any questions?

[maureen.craig@colorado.edu](mailto:maureen.craig@colorado.edu)

*MS Bookings link for  
appointment scheduling →*

