

# MSE Strategic Planning – Refresh and Revise Effort

MSE Staff and Faculty Retreat

August 11, 2020



# Committee's charge

- In response to the College of Engineering's most recent strategic planning activities, this committee examined how to implement aspects of COE's strategic plan through MSE-level initiatives.
- The MSE Strategic Plan, developed in 2013, was not changed at this time since Institute-level strategic planning is underway – Results of the Institute-level exercise as well as activities at the College-level can be used to inform a new/updated plan going forward.

# Comparing COE's Core Strategies to MSE's Strategic Objectives

## COE's Core Strategies (2019)

- **Community**
  - Ensure a highly diverse corps of faculty and staff, retained through reward, recognition and development
  - Build and sustain an inclusive, collegial community (among students, faculty, staff and alumni)
- **Learning**
  - Provide students with intentional and comprehensive support
  - Create and sustain relevant, effective ways for students to learn
- **Discovery**
  - Forge productive and impactful partnerships
  - Conduct imaginative and influential research

## MSE's Strategic Objectives (2013)

1. Enhance and sustain our world-class community of scholars.
2. Build a state-of-the-art materials innovation infrastructure for research and education.
3. Develop and promote collaborations within and outside of MSE through a suite of synergistic strategies
4. Enhance excellence in materials education to create a new generation of scholars equipped to meet the challenges of the future.
5. Promote the visibility and impact of MSE as a School and discipline to both internal and external stakeholders.

# Complementary MSE-level activities that support the COE Core Strategies

- Ensure a highly diverse corps of faculty and staff, retained through reward, recognition and development
  - Faculty mentoring program and workshops
- Build and sustain an inclusive, collegial community among students, faculty, staff and alumni
  - Include and support transfer students and those seeking MSE minors/certificates – *Kerry Wallaert/USAC – on-going effort*
  - Student organizations – *WiMSE, Materials Advantage*
  - School-wide informational, social, and community building events – *town halls for the MSE Community, first year student events, MSE-specific graduation and awards celebrations*
  - Strengths workshop for faculty and staff in May 2019
  - Diversity, Equity, and Inclusion Council; CRSH Committee
  - Alumni – *Targeted development officer and mentoring program*
- Create and sustain relevant, effective ways for students to learn
  - Constructing a physical space for students to gather – *Naresh Thadhani – MRDC 2503 is being converted to a space for graduate students*
  - Identifying MSE foundational concepts in UG curriculum – *Mary Lynn Realff and Undergraduate Curriculum Committee – curriculum analysis framework was developed, faculty input now needed*
  - MSE Teaching practicum
  - Changes to Ph.D. core courses and structure of M.S. program
  - The MILL – *Mark Losego, OPALL – Paul Russo*

# Areas for initiatives within COE's Core Strategies

- Ensure a highly diverse corps of faculty and staff, retained through reward, recognition and development
  - Area – Intentionally support staff to pursue professional development and mentoring activities
- Build and sustain an inclusive, collegial community among students, faculty, staff and alumni
  - Area – Include and support international students in the MSE community
- Provide students with intentional and comprehensive support
  - Area – Mentoring of undergraduate advisees
  - Area – Support of graduate students in advising relationships
- Forge productive and impactful partnerships/Conduct imaginative and influential research
  - Area – Giving faculty more time

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# Intentionally support staff to pursue professional development and mentoring activities

- GT-level challenges with staff promotion and job satisfaction
- What can we do at the MSE level?
  - Understanding current practices for pursuing and engaging in professional development activities
    - Opportunities at Georgia Tech
    - Opportunities outside of Georgia Tech
  - Encouraging staff to participate in mentoring programs offered by Georgia Tech

# Activities undertaken and next steps

- Information presented at MSE Staff meeting in May 2020
- Developed and distributed a survey to MSE Staff to understand perceptions and needs for professional development in July 2020
- Implementation activities in 2020-2021
  - Analyze survey results – Initial results
    - Overall, MSE staff are satisfied with professional development opportunities available to them - ~50% of the respondents took professional development classes in the past year
    - Majority of respondents felt encouraged to take professional development training
    - Interest in training that is not targeted to managers
    - Interest in certificate programs – topics not specified in survey results
  - Reach out to managers about practices and needs
  - Develop and discuss best practices to be implemented
  - Continue discussions to understand other staff development opportunities

# Areas for initiatives within COE's Core Strategies

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# Initiative on a Support Infrastructure for MSE International Students

Faisal Alamgir and Hamid Garmestani

- The SPC determined MSE international students face some perennial issues that that are not addressed in a coordinated way
- Issues include, for example:
  - Travel restrictions
  - Delays in obtaining visas
  - Unexpected changes to immigration policies
  - Difficulty in securing internships and industry jobs
  - Cultural and social isolation
- In general, most of the negative issues have been exacerbated by the erratic changes in foreign policy over the past several years

At the end of the Spring 2020 semester, the SPC was worried about what immediate problems our international students were facing.

Emails were sent to reach out to the undergrad and the grad international student bodies.

A survey was conducted on their immediate and their projected situation brought on by the pandemic.

**Poll Questions for International Students:**

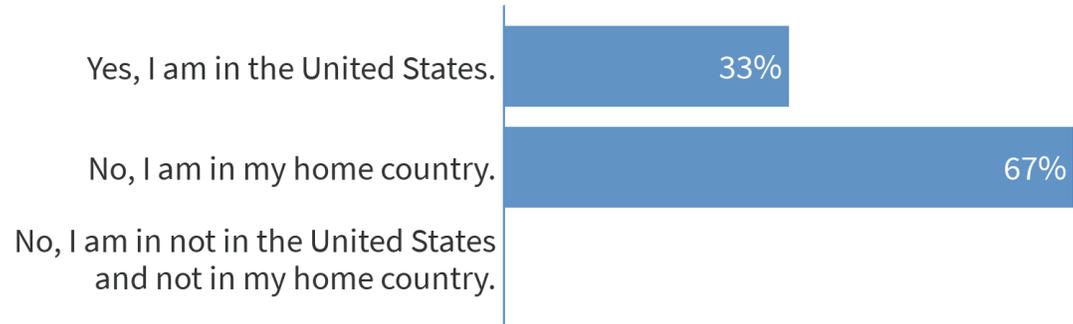
# of undergrad respondents: 9;

# of grad respondents: 26

1. Are you currently sheltering in the United States during the pandemic?
  - a. Yes, I am in the United States.
  - b. No, I am in my home country.
  - c. No, I am in not in the United States and not in my home country.
2. Are you facing any potential (international) travel restriction that may prevent you from returning to campus for Fall?
  - a. No, I am in the United States.
  - b. Yes, I am sure that I will not be able to return to campus this Fall.
  - c. At the moment I am somewhat unsure about whether or not I will not be able to return to campus.
  - d. No, I am sure that I will be able to return to the United States.
3. Did you live in housing managed by GA Tech prior to the campus shutdown?
  - a. Yes
  - b. No
4. Are you facing any housing insecurity?
  - a. Yes, I am unsure about where I will live in the near future because it is a temporary arrangement.
  - b. Yes, I am unsure about where I will live in the near future because I will soon not be able to afford my current housing arrangement.
  - c. No, I am about as secure as I was prior to the pandemic.
  - d. Other. (You may choose to elaborate in the next cue).
5. If you chose "Other", please elaborate here (if you are comfortable doing so).
6. Are you facing any financial insecurity due to the pandemic?
  - a. Yes.
  - b. Yes, somewhat.
  - c. No, my financial situation is about the same as it was prior to the pandemic.
7. Please elaborate on your answer to #6 if you wish to do so.
8. Do you feel that you have access to advice and counsel specific to pandemic-related issues specific to international students?
  - a. Yes.
  - b. I am not sure since I have not tried to access any advice/counsel.
  - c. No.
9. Please elaborate on your answer to #8 if you wish to do so.
10. Are there any other issues you face as an international student during the pandemic that you would like to bring up?

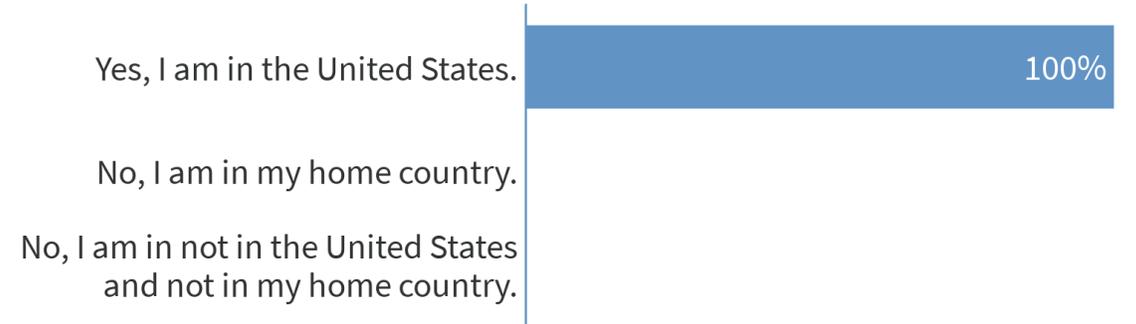
## Undergraduates

**Are you currently sheltering in the United States during the pandemic?**



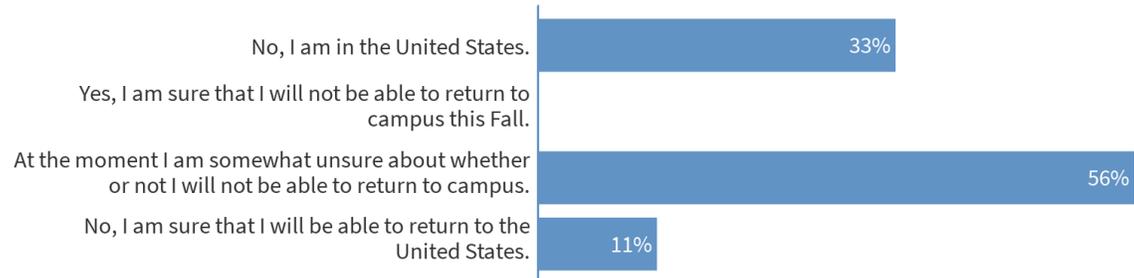
## Graduates

**Are you currently sheltering in the United States during the pandemic?**



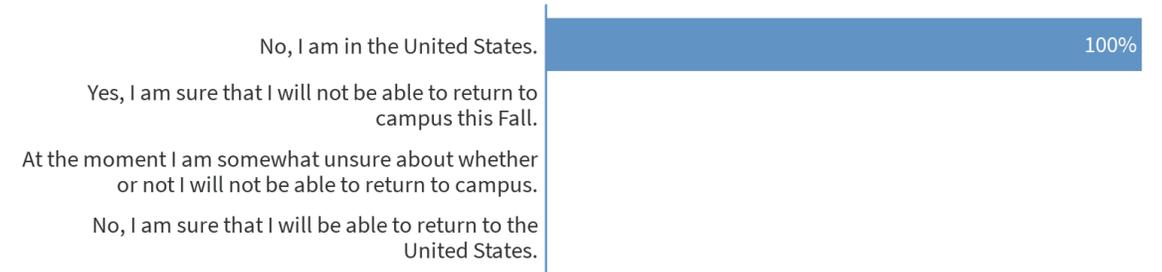
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## Undergraduates

**Did you live in housing managed by GA Tech prior to the campus shutdown?**



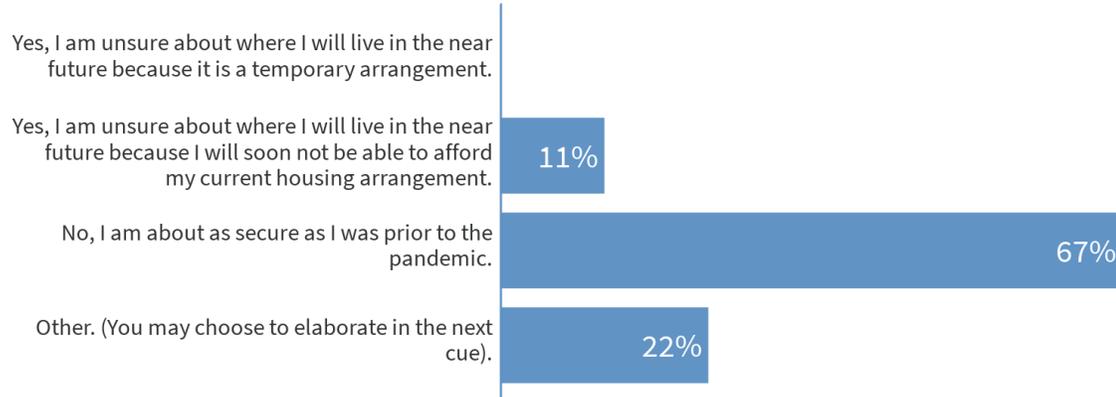
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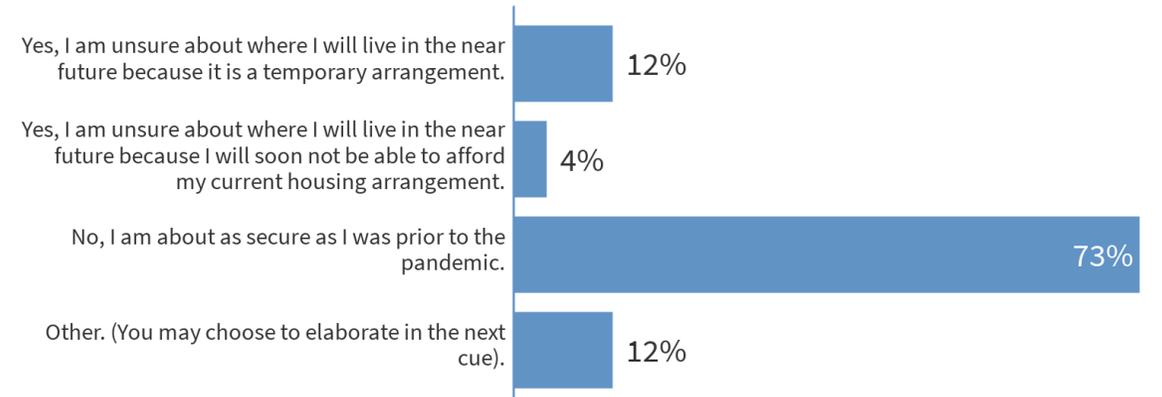
## Undergraduates

### Are you facing any housing insecurity?



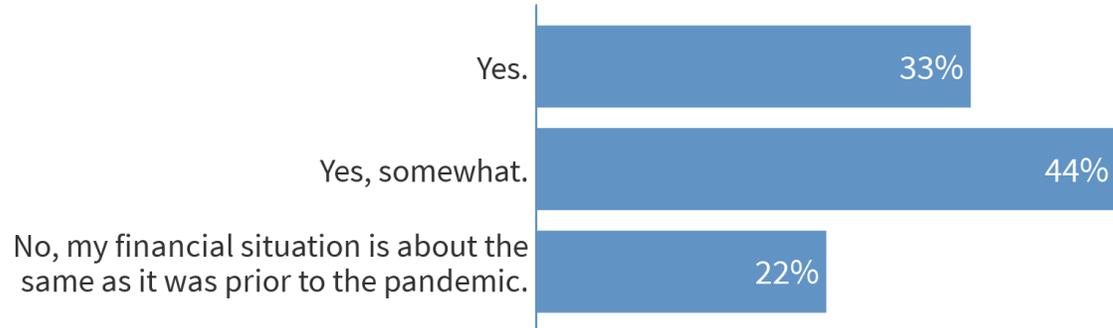
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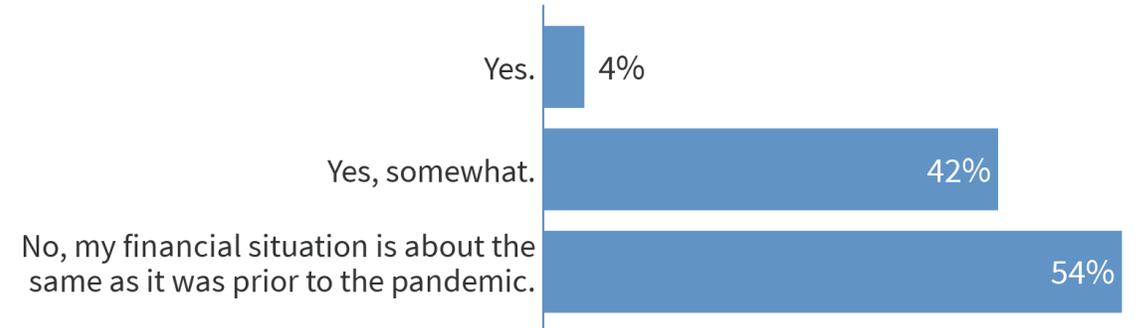
## Undergraduates

**Are you facing any financial insecurity due to the pandemic?**



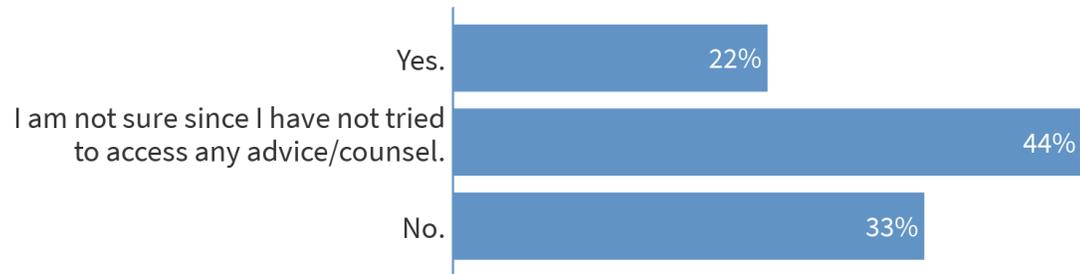
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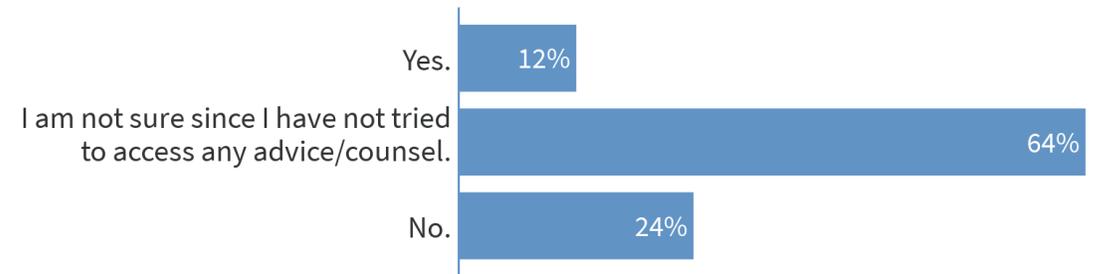
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**Do you feel that you have access to advice and counsel specific to pandemic-related issues specific to international students?**



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## Infrastructure for Our International Students at MSE

- **Goal: Implement a local (MSE-level) infrastructure where issues specific to international students at MSE can be addressed and redressed.**
  - Solidify connections between our local infrastructure to the resources at the institute level.
- Stakeholders: Our international students, our faculty and staff, any central office at the institute level that caters to our international student body.
- **Proposed activities:**
  - a. Set up open channels of communications between the stakeholders**
  - b. Set up a local hub for information – a faculty and a staff advisors**
  - c. Have bi-weekly office hours and open forums (socials) every two months**
  - d. Invite talks by individuals who can address legal, immigration, and professional matters pertinent to international students**
- Timeline for implementation
  - Activities 'a' - 'c' can be implemented within the Fall semester
  - Activity 'd' can begin from Spring 2021.
- List of resources are needed: Financial resource for social activities, and resources for the advisors to implement plans
- Assessment methods and frequency
  - Surveys can be conducted in the open forum meetings once a semester

# Areas for initiatives within COE's Core Strategies

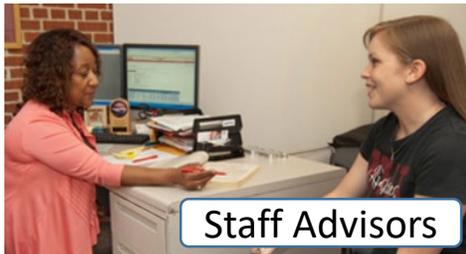
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# Impacting MSE Pathways to Success:

Supporting MSE undergraduates to articulate their goals and define their pathways to success

What is required?  
Which Concentration? Coop? Research?  
Minor? Certificate? Industry?  
Graduate School? Extracurricular  
Activities?

Defining Your  
Degree Pathway



Faculty Mentors

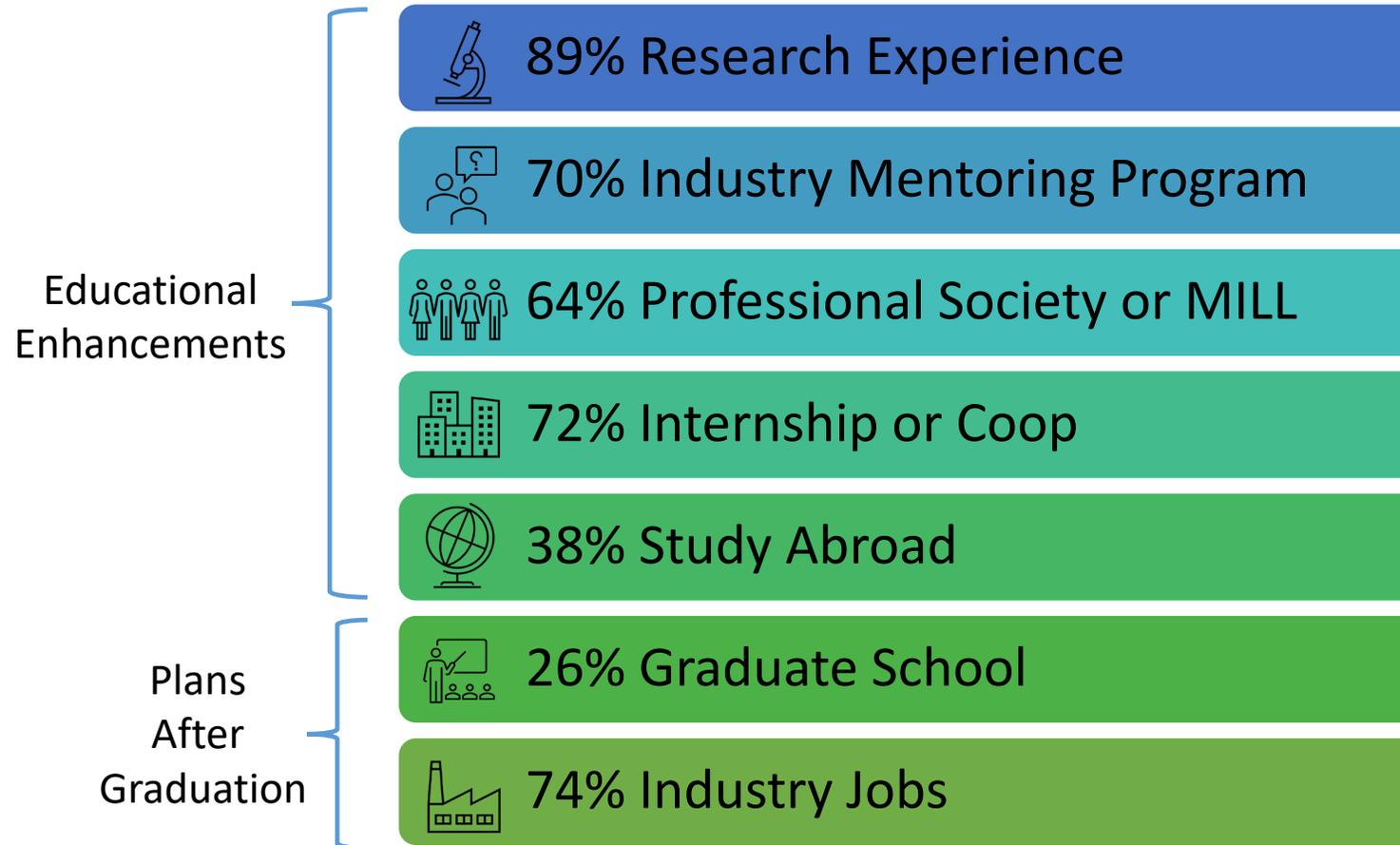
Enhancing Your  
Degree Pathway



Industry Mentors



# Statistics for 2019-20 BS MSE Graduates

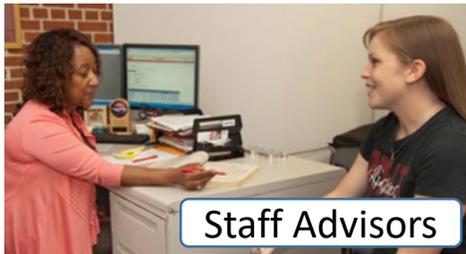


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Defining Your  
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Faculty Mentors

Enhancing Your  
Degree Pathway



Industry Mentors



# Cohort Model for Faculty Mentors

Faculty	COHORT
Cai	MSE-16
Gokhale	MSE-16
Kumar	MSE-16
Muhlstein	MSE-16
Russo	MSE-16
Shofner	MSE-16
Singh	MSE-16
Speyer	MSE-16
Vogel	MSE-16
Yao	MSE-16
Alamgir	MSE-17
Brettmann	MSE-17
Jacob	MSE-17
Kacher	MSE-17
Li	MSE-17
Lin	MSE-17
Realff	MSE-17
Stingelin	MSE-17
Wang	MSE-17

Faculty	COHORT
Jayaraman	MSE-18
Losego	MSE-18
Milam	MSE-18
Qin	MSE-18
Ramprasand	MSE-18
Thadhani	MSE-18
Tsukruk	MSE-18
Yushin	MSE-18
Correa-Baena	MSE-19
Garmestani	MSE-19
Gerhardt	MSE-19
Jang	MSE-19
Liu	MSE-19
McDowell	MSE-19
Srinivasarao	MSE-19

Faculty	COHORT
Cai	MSE-20
Gokhale	MSE-20
Kumar	MSE-20
Muhlstein	MSE-20
Russo	MSE-20
Shofner	MSE-20
Singh	MSE-20
Speyer	MSE-20
Vogel	MSE-20
Yao	MSE-20
CP Wong	MSE-20
ZL Wang	MSE-20

# Faculty Mentoring of UG students

- Students look to their faculty mentor to help guide them to their choice of Concentration and for guidance with after-graduation plans
- Students talk to their research advisor, graduate assistant or post-doc during their research experience
- Faculty would like to be more meaningful to the students in these mentoring interactions, but many do not feel equipped to advise the students around their future careers if that future does not include graduate school
- Faculty are unsure about what questions to ask the student to help them choose a Concentration
- Until recently there was no central site to direct students to when they have process questions or questions about services available on campus

# Initiative Team

<u>Cohort</u>	<u>Faculty</u>
• MSE-17	Faisal and Josh
• MSE-18	Sundaresan and Dong
• MSE-19	Seung Soon and Hamid
• MSE-20	Satish and Robert

# Proposed Timeline

Request for funding and work began on this initiative in summer 2020 with the training of faculty using the new materials happening towards the end of fall 2020 or beginning of spring 2021. We are waiting on funding to engage Brittan Fellow to develop materials.

- **Aug** – Two one hour meetings of faculty to identify the situations that they find themselves in when they are mentoring students and are “stuck” because of lack of supporting materials/training.
- **Aug/Sept** – Development of the materials with drafts available by the mid-Sept.
- **Mid/late Sept** – One hour meeting of faculty to review materials and receive training on how to use the materials.
- **Early Oct** - One hour meeting of faculty to review the MODIFIED materials and receive training on how to use the materials.
- **Late Oct** – Training of the full faculty to use materials developed through this initiative (the training would be offered multiple times to ensure that all faculty feel comfortable with the materials and can be more meaningful to students).
- **Nov** – Cohort MSE-17 mentoring meetings with their faculty mentors
- **Dec/Jan** – Cohort MSE-18 mentoring meetings with their faculty mentors
- **Jan/Feb** – Cohort MSE-19 mentoring meetings with their faculty mentors
- **Feb/March** – Cohort MSE-20 mentoring meetings with their faculty mentors

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- Forge productive and impactful partnerships/Conduct imaginative and influential research
  - Area – Giving faculty more time

Support of graduate students in advising relationships – *brainstorming session with GSAG Natalie Stingelin and Eric Vogel*

- What specific gaps/challenges should be addressed?
- Ideas on initiatives
- Thoughts on priority of this for the MSE strategic plan

# Three potential initiatives to start

1. A regular townhall on “being a PhD student”. Only one or two faculty members. Start with incoming students. Natalie and Eric willing to volunteer.
2. Ensure that PhD students have multiple faculty mentors by requiring a PhD proposal deadline is met. The graduate committee will discuss and present a recommendation to the full faculty. Important to define guidelines for the proposal and the extension.
3. Ensure that graduate students, faculty and staff are aware of Georgia Tech resources related to conflict avoidance and resolution. The graduate committee will discuss codifying these process in the MSE Graduate Student Handbook.

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# Giving faculty more time

- The two COE Core Strategies most closely associated with research require additional bandwidth and time
- At the MSE-level, faculty time is allocated to three main activities – teaching, research, and service
- We are proposing occasional opportunities for reduction in teaching and MSE service to allow faculty to pursue research efforts and partnerships

# Initiative concept – Faculty leave policy

- **Where did this idea come from?** – ChBE has a similar program
- **Who can participate?** – All tenured faculty with a majority appointment in MSE
- **What duties are reduced?** – Teaching load is reduced to 1 course for the nine month AY, MSE committee service is removed for the semester when the leave is taken.
- **How often can a leave be taken?** – *Initial schedule, subject to change:*
  - 4 years after promotion/tenure to Associate Professor and then every 7 years
  - If the person began their appointment as a tenured Associate Professor or Full Professor – every 7 years from their initial appointment
  - Faculty would be expected to take the leave on the prescribed timeline – leave cannot be requested at any time
- **What is needed to apply?** – one-page proposal with activities and anticipated outcomes – due in January before the AY when leave would be taken
- **How will the leave policy be assessed?** – Part of the annual report for individual faculty, policy evaluated every three years by the Chair and Faculty Advisory Committee

# Implementation – Faculty leave policy

- August and September 2020
  - Present policy to Faculty Advisory Committee for comment on the process, including frequency of leave and strategies for covering course offerings and service needs.
  - Final policy for implementing the program would be presented to the School Chair and the Assistant Director of Administrative Operations.
- October 2020
  - Eligible faculty would be notified of their option to take a leave in AY 21-22. A projected schedule of faculty leaves through AY 28-29 will also be developed for planning purposes.
- January 2021
  - Eligible faculty would notify the School Chair and the Assistant Director of Administrative Operations of their intent to take a leave in AY 21-22 by submitting a one page proposal. Any requests to reschedule the leave would have to be approved by the School Chair and the Faculty Advisory Committee.
- Going forward – AY 22-23 and beyond
  - Eligible faculty would be notified by October 15 and expected to submit a one page proposal by the end of January in the AY prior to the planned leave.

# Next Steps – Call to Action

- What is your role? Let us know your questions/comments and where you would like to engage to bring about positive change
- Collaborate with MSE standing committees and communities to implement initiatives
- Links to Diversity, Equity, and Inclusion Council - Faisal, Alyssa, Latanya, Valeria, Natalie

Thank you for your attention and action!

# Reference slides

# Reference: Institute Strategic Plan

1. \*Amplify Impact: Embrace our power as agents of change for the public good and concentrate our research and learning efforts on identifying and solving the most critical and complex problems of our time, locally and globally.
2. Champion Innovation: Champion our leadership position as an engine of innovation and entrepreneurship and collaborate with other public and private actors to create economic opportunity and position Atlanta and Georgia as examples of inclusive innovation.
3. Connect Globally: Strengthen our role as a convener of worldwide collaboration and build a global learning platform to expand our reach and amplify our impact.
4. Expand Access: Empower people of all backgrounds and stages of life to learn and contribute to technological and human progress.
5. \*Cultivate Well-Being: Strengthen our culture of well-being and create an environment of holistic learning where all members of our community can grow and learn to lead healthy, purposeful, impactful lives.
6. \*Lead by Example: Lead and inspire by example by creating a culture of deliberate innovation in our own practices and by being an example of efficiency, sustainability, ethics, and inclusion.

\*Working Group contains a person from the MSE Community

# Our Guide: COE's Core Strategies and Objectives

- Ensure a highly diverse corps of faculty and staff, retained through reward, recognition and development
  - Incentivize and provide pathways for faculty and staff to lead and innovate
  - Create a desirable workplace by promoting respect, engagement, and success
- Build and sustain an inclusive, collegial community among students, faculty, staff and alumni
  - Increase awareness of and investment in the value of individuals as members of the College family
  - Increase inclusivity and culture among faculty, students, staff, and alumni
- Provide students with intentional and comprehensive support
  - Increase utilization and impact of programs and services that support health and well-being for students
  - Improve the quality and effectiveness of advising
- Create and sustain relevant, effective ways for students to learn
  - Improve the relevance and impact of the classroom experience
- Forge productive and impactful partnerships
  - Increase interactions with external partners to engage opportunities beyond the scope of a single organization
  - Enhance the efficiency and impact of the technology transfer pathway
- Conduct imaginative and influential research
  - Foster fearless innovation in research

# Initial List - Areas where we would like to see initiatives

- Ensure a highly diverse corps of faculty and staff, retained through reward, recognition and development
  - Area – Intentionally support staff to pursue professional development and mentoring activities
- Build and sustain an inclusive, collegial community among students, faculty, staff and alumni
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  - Area – Include and support transfer students and those seeking MSE minors/certificates – *Is being pursued by Kerry currently*
- Provide students with intentional and comprehensive support
  - Area – Mentoring of undergraduate advisees
- Create and sustain relevant, effective ways for students to learn
  - Area – Developing topics for learning threads in curriculum
  - Area – Improving the experience of teaching assistants to improve learning ( could also include teaching practicum students)
  - Area – Constructing a physical space for students to gather – *Is being considered by Naresh separately so this might not need to be a focus area for us.*
  - Area – Training on the use of classroom technology
- Forge productive and impactful partnerships
  - Area – Teaching/service relief for faculty to develop center-level proposals
- Conduct imaginative and influential research
  - Area – Enhancing and nucleating new collaboration activities
  - Area – Providing funds for faculty travel/training to develop new collaborations/networks