Data on Event Participants

Location of participants shared in the chat:

- 73% (98/134) in a Primary Advising Role
- 20% (27/134) in Advising Administration, including Assistant and Associate Deans

Trends of First-Year Students in STEM (Dionne)

*Poll question*: Are you noticing any trends amongst your first-year STEM students that may be different from last year?

*Poll results*: Yes 52%, Unsure 37%, No 11%

Common Trends:
- Mental health issues and mental wellness are of major concern for students at all levels.
- Lack of academic preparedness in Math is impacting students. Seeing more gaps in K-12 prep for pre-college course work.
- Continued issues with students not seeing the need, nor confidence to seek tutoring or academic coaching.
• Academic support resources at institutions are stretched very thin. Long waits for appointments.

**Needs of First-Year Student in STEM (Jessica)**

*Poll question:* What needs do you feel your first-year STEM student may be presenting at this time? (check all that apply)

*Poll results:* Subject matter assistance/tutoring 82%, Mental health/wellness 76%, Social engagement/anxiety 55%, Major fit issues 47%, Other 8%

• **Subject matter assistance/tutoring issues:**
  - Students appear surprised with the amount of time needed to study
  - Advisors face challenges in getting students to use tutoring. Tutoring centers often help B students become A students and some C become B students but the D and F students that really need it do not utilize it.
  - Students who are struggling often feel intimidated to visit tutoring centers or office hours because they believe the other students there are doing better.
  - Students would rather "self help" via youtube or other resources than sitting with a tutor
  - Tutoring times conflicting with work obligations. College is expensive and many need to work to support themselves.

• **Major fit issues/needs:**
  - Many students do not reflect on their reasoning behind pursuing a STEM major and do not understand the challenging nature of STEM degrees prior to beginning college.
  - Students enter STEM majors because of financial benefits and/or perceived prestige without fully understanding the major/career path.
  - Some students feel as though they need to stay with their current major because changing majors indicates failure.

• **Social engagement/anxiety issues/needs:**
  - Students are unsure how to interact with faculty/staff. When they enter offices, they do not know how to ask for help.

• **Mental Health/Wellness issues/needs recognized by participants**
  - Students face challenges maintaining their mental health (taking medication, seeking counseling or accommodations) when they no longer live with parents/guardians who are urging them to seek support.

• **Other needs include:**
○ Academic coaching to help address personal management, organization, and study skills.
○ Support in learning that deadlines are not flexible and that exam retakes are often not an option.
○ Advertisement of resources in a way that meets the needs of current students. Students report feeling that resources are presented in an "old fashioned" that causes them to feel less motivated to seek assistance.
○ Faculty encouragement to help build confidence and persistence.
○ Assistance in recognizing that GPA does not define one’s learning or college experience.
○ An explanation of what office hours are and how to make the best use of them.

Support Resources for Students (Lisa)

Poll question: Does your institution offer support resources that meet the current needs of your first-year STEM students?

Poll results: Somewhat 63%, Yes 36%, No 1%, Unsure 1%

Support Resource suggestions/ideas:
● Foster a culture of students studying in the space where there are tutors so it becomes more culturally normal to be in those spaces.
● Encourage students to seek help by explaining that the best students are often those who use tutoring and office hours.
● Offer peer tutoring free of charge in STEM and other program disciplines.
● Remind
● Organize a Learning Leaders/Peer Mentor Program for first-year students that consists of upper-classmen who offer study sessions outside of first-year STEM courses.
● Encourage students to utilize tutoring services by reminding them that they are paying for the service as part of their tuition. This frames it as an investment that they have made.
● Develop a tutoring center specifically for first year students that utilizes peer tutoring to provide group and one-on-one tutoring services.
● Create dedicated learning spaces for STEM students where students can collaborate and assist each other with difficulties.
● Pair first-year students with upperclassmen mentors to facilitate sharing of academic/professional insights and to create a supportive, inclusive STEM community. Host check-in parties at the beginning and end of the semester to foster relationship building between mentors and mentees.
Encourage instructors to create Youtube videos that explain critical course concepts to best meet students where they are at since many students turn to Youtube for support.

Share stories about students’ positive experiences in using tutoring centers when recommending tutoring to other students.

Assist students in identifying time in their schedules to visit resource center.

Offer peer tutoring digital handouts for core courses for students who cannot attend tutoring because of their schedule.

Send students follow-up email after advising appointment that includes links to information about tutoring services.

Embed peer tutors in STEM courses.

**Support Resources for Advisors (Jenn)**

*Poll question:* Do you feel that, as an Advisor, you have the resources/tools you need to support your first-year STEM students?

*Poll results:* Somewhat 66%, Yes 24%, No 4%, Unsure 5%

Support resources suggestions/ideas:

- Connect with faculty to address specific concerns to better inform our advising practices.
- Offer more mental health support for students as well as training for advisors around how to approach mental health cases.
- Sign up for alerts for free or low-cost webinars and other professional development opportunities that will help frame your advising conversations with your specific population of students (first-year, STEM, etc.).
- Offer more soft-skills, success, & coaching resources.
- Advocate to administration for better tools to help today's student.
- Brainstorm ways to form advisor professional development opportunities within your institution so that you can share best practices and trainings as a unit.

**Strategies to Support First Year Students in STEM (Micalena)**

*Poll question:* Have you implemented any strategies to address some of the issues you may be seeing amongst your first-year STEM students?

*Poll results:* Somewhat 51%, Yes 32%, No 17%

Strategies included:

- Utilize an appreciative advising approach.
- Require math placement exams.
• Offer group advising sessions.
• Train peer advisors who can normalize using tutoring services and reaching out for help.
• Offer virtual and in-person tutoring appointment options in order to best meet students where they are at.
• Send targeted emails campaigns to students who are facing academic challenges.
• Send personalized outreach emails and continually monitor students’ progress.
• Send weekly newsletter to all first-year advisees.
• Prep students for advising meetings by auto-sending pre-advising emails.
• Connect students with young alumnus to help them conceptualize success and long-term goals.
• Assign academic success-related tasks to students through a learning management system and track completion. Such tasks can include meeting with an advisor and attending office hours.
• Contact students via text message.
• Walk students to partner offices (e.g., tutoring) to provide warm handoff.
• Offer a first-year seminar course taught by faculty or advisor, along with upperclassmen peer leaders/mentors.
• Require a seminar course for students on probation.
• Host a weekly seminar on study skills and metacognition based on the book “Teach Yourself How to Learn” by McGuire and McGuire.
• Schedule weekly meetings between first-year instructors and advisors to check in about students of concern.
• Develop a specialized first-year advising team.
• Teach students how to create personalized plans of study in order to promote their degree progression.
• Advise students to create thoughtful schedules that limit tricky class combinations.
• Proactively outreach to students who are taking challenging classes at start of term.
• Empower students by using software that enables them to schedule advising meetings on their own.
• Encourage students to maintain life/work/school balance.
• Emphasize that taking breaks/leave of absences is okay. There is no timeline on success, and there is no requirement to graduate within four year.
• Reach out to senior STEAM students to learn more about their experience and to inquire strategies that promoted their success/persistence.
• Share a list of frequently asked questions with first-year students.
• Create a glossary of institution/higher education terms to help first-year students learn how to navigate their experience. See Rowan University’s Glossary of Terms as an example.
• Offer diverse appointment times and appointment types (e.g., in person, virtual, scheduled appointment, drop in).
● Create supplemental courses that apply as electives towards degree requirements to support students struggling in STEM coursework by midterm.
● Provide students with option to drop down to a lower-level math course if they are unsuccessfully completing the course by midterm.
● Align curriculum across diverse majors so that they students can easily change majors if they are facing challenges in STEM coursework.
● Offer STEM prep courses over summer to promote preparation, engagement, and belonging.
● Offer online courses over the summer after first-year to help students maintain their skills and momentum.
● Facilitate community gatherings with first-year students and upperclassmen peer mentors.
● Create a course in your institution’s learning management system that includes videos, links to resources, and opportunities so students can review them before meeting with their first year advisor.
● Encourage students to utilize tutoring services by reminding them that they are paying for the service as part of their tuition.
● Provide soft handoffs by walking students to relevant offices offices on campus (e.g., tutoring services). This can help limit any intimidation/anxiety a student may experience when trying to connect with a new office/service.
● Require students to meet with a tutor as an assignment for a first-year experience course.
● Limit barriers by adjusting curriculum to meet students current needs (e.g., redesign curriculum to begin with lower-level math courses).