

# SUNY Poly's S-STEM Scholar Initiative

*~Spring 2025 Cohort 1 Scholar Focus Group Results~*

A Report To:



# SUNY POLY

SUNY Poly

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*Inspired Social Research & Program Evaluation*

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## Introduction

In Fall 2022, SUNY Polytechnic Institute (SUNY Poly) contracted with Dr. Megan Mullins and her team of evaluators to conduct evaluation activities for SUNY Poly's newly awarded National Science Foundation funded S-STEM Scholarship program titled *"Supporting Degree Completion in Engineering and Engineering Technology Programs through Experiential Learning and Self-Directed Professional Development."* The long-term goal of this program is to break down barriers to degree completion within the programs of Civil Engineering, Civil Engineering Technology, Mechanical Engineering, and Mechanical Engineering Technology (CME&ET). In pursuit of this goal, SUNY Poly will provide a total of 65 one-year scholarships to 20 unique students in CME&ET. Students selected as Scholars will include both first year and transfer students. Over the grant period, this program will provide the following:

- "Know One Be One" recruitment experience for interested high school students,
- S-STEM scholarships to 20 unique students through degree completion,
- An S-STEM First Year Experience Course,
- One-on-one academic advisement and mentoring for S-STEM scholars,
- Mobius subscriptions for 1st year S-STEM scholars for Math skills support,
- S-STEM Seminar and Workshop series,
- S-STEM Scholars professional development fund,
- Experiential learning opportunities for Scholars, and
- FE Review course, purchase of FE review materials for independent study, and supports to increase student completion and passing of the FE exam.

Summarized below are the results from an in-person focus group held with SUNY Poly S-STEM Cohort 1 Scholars in Spring 2025. During the focus group, participants were asked to discuss their initial expectations of the program; engagement with, and benefits of, a range of campus and program resources (e.g., mentoring, tutoring, seminars); recommended program supports; and advice for future Scholars. In total, nine Scholars participated in the focus group discussion, which lasted approximately 60 minutes and was recorded with participant consent. The recording was subsequently transcribed and coded for the primary and secondary themes summarized below. The findings presented in this report can help organizers better understand S-STEM Scholar experiences and inform improvements to the program moving forward.

## Focus Group Results

### Program Expectations & Highlights

Participants were first asked to describe their recruitment experience and any expectations they held for the S-STEM program as they entered it. All Scholars explain that they learned about the program via recruitment emails and were motivated to apply for a variety of reasons, including the financial support, opportunities for community building and professional networking with fellow engineering students, and access to Scholar supports such as math tutoring and professional development opportunities (see next page for examples).

### Select Quotes:

#### **Financial Support**

*"I didn't have any expectations. I saw an email and just applied. ... I **mostly saw the money for school and how it would make it cheaper**, so that's something that interested me. I didn't really know much about it going in, though."*

*"I got an email and when I **saw it was a scholarship and they wanted to help pay for my schooling**, I thought it seemed like a good fit for me."*

#### **Community Building & Professional Networking**

*"I did see similar emails and joined the program **to be part of a community of other engineers**."*

*"It **was also about the networking for me**. I think it's important. ... There are so many people in the country going into engineering and I think it's important to put ourselves out there so we're not searching for a job years after college. We can jump right into that."*

#### **Access to Program Resources**

*"I couldn't pay for college on my own and this hefty scholarship helped out. When I was considering the scholarship, I was playing [sports] and a lot of coaches told me that it's not a good idea to take on an engineering major while playing because of the busy schedule. ... **When I saw that S-STEM was going to offer a little more of a tailored tutoring experience and other resources to help me along** that the school itself might not offer, I kind of jumped on the opportunity."*

*"I saw it in my email, and I knew that I needed help paying for school. I also was intrigued when I saw the part about how they were focused on helping engineering students in particular. ... **In high school, I was also a part of a sort of STEM program and they really helped us to find internships and network** with people who were in the fields that we wanted to go into. So, **this kind of gave me the same feel of that program**."*

*"It wasn't only the money, but also **the fact that they said they were focusing on math tutoring**. I knew I might struggle because in engineering you go into a higher level of math than other majors would. So, I think that nudged me to accept and continue with the scholarship."*

Next, participants were asked to describe what they consider to be the top benefit of the S-STEM Program. Personalized academic support from program-affiliated faculty is considered a top benefit by many, with these Scholars describing how professors and advisors regularly check-in during both one-on-one and standing group meetings to report on their academic progress and recommend targeted interventions, such as subject-specific tutoring or course changes. Other program components highlighted as beneficial include the first-year seminar and the GPA requirement, with two Scholars respectively explaining that the seminar introduced informative guest speakers and that the grade requirement has motivated them to keep up with their coursework (see next page for examples).

### Select Quotes:

#### Personalized Guidance & Support

*"It's helped to have someone who's consistently checking up on you to make sure that you are **meeting standards**. We meet every Friday and Professor Shen is always checking up on us, making sure we're doing well in our classes. If we aren't, **she can always provide us with resources that we might not have easy access to.**"*

*"[One professor] pulled me aside last year and told me how I was doing in my math classes and I was struggling really bad. So, **he gave me really good advice and I followed it and now I'm doing pretty well** this year."*

*"The Friday meetings were a little bit annoying at first because you have to meet each other at five o'clock. But after a little bit, **it started feeling useful because I started to realize that I actually need to reflect and think about what I need to get done** for the next week, what exams might be coming up, what I should be studying for. So, the most helpful thing by far, aside from the money, has been those Friday meetings."*

*"The tutoring support. [One professor] has always been there to help us move along through our work. She wants all of us to be successful. And she would help us write our resumes and stuff like that. That's what I find really excellent about [the program]."*

*"Obviously the funding comes in handy when you look at your receipts. It's covering a lot of my tuition. But what I would say trumps that is... I had some difficulty in my first semester with Calculus I. About halfway through the year, I realized I just didn't click with my professor and my grades started to dip a little bit. So, **I got in contact with our advisor and she actually got me in touch with the math division, connected me to tutors through the foundation** and [helped me get into] a different class. It was something big that I really wasn't expecting to see from the school, kind of cooperating to help me get out of that class."*

*"I think **the Friday meetings really help because she checks in on how you're doing in classes and stuff**. And if you're not doing great, she'll help you find tutors and stuff like that. It's a really big help."*

#### Other Benefits

*"In our first-year seminar, **they actually had a lot of guest speakers come in that I'm pretty sure wouldn't have come in otherwise. A lot of career development, a lot of social networking programs came in and presented**, which kind of opened up a lot of things to me. ... One guy came in and had us working in groups to enhance communication. [Others] came in to talk to us about different clubs and stuff on campus."*

*"In a way, **some of the requirements are keeping me on track, specifically the GPA requirement**. Knowing that I have to have a B or above in pretty much all my classes is really kind of making me... a little bit wary of what's going on in my courses. Just knowing I have that requirement with a lot riding on it."*

## Scholar Resources & Support

For much of the group discussion, participants were asked about their engagement with and the perceived benefits of, various program components and campus resources.

First, Scholars were asked whether they have utilized SUNY Poly's **Career Services**, with two of nine participants answering affirmatively. One Scholar elaborated on their engagement with the office, explaining that the recent career fair presented a valuable opportunity for professional networking and noting that the experience helped them secure a summer research position.

### All Comments:

*"We just had a career fair held by the career services [and] **they sent me an email that connected me to a research thing that I got lucky to get into for the summer.** ... **They have also helped a lot with networking.** ... [At the career fair], I made a lot of connections, got a lot of cards, talked to a lot of people."*

All nine participants indicated that they are members of the **ACE Program** and, when asked how the program has been helpful to date, all but one mentioned the ACE-sponsored seminars and explained that these events have provided useful insights regarding time management, available career options and job search advice, and assistance with resume development. Additionally, the remaining Scholar underscores the monthly ACE meetings wherein they are able to maintain regular contact with their program-provided academic advisor.

### All Comments:

#### **ACE Seminars**

*"The last {ACE seminar} I went to **was about time management and I feel like that was really helpful.** They had some upperclassmen come in and show us how they used their time and how they managed things."*

*"Some seminars are on careers, so **they'll have guest speakers come in from different fields and give examples of job openings and how they interact with others,** what their actual job entails. Sometimes it's more like a lecture, but they had one on a physics/math concepts that was pretty interesting. Some of it is more educational, but it's potentially opening up a different career path to us."*

*"There was a seminar I attended that was basically **helping guide you on what you should do at the career fair that they had recently.** It was like how to pitch or introduce yourself to potential employers and how to get information on a company that you're interested in."*

*"**They had a resume building workshop.** ... And definitely the career events—you get networking [opportunities] and just learn a lot each time there's an event. You're always going to get something out of it that will help you become more successful."*

#### **ACE Meetings**

*"The ACE Program. ... **The monthly meetings really help.** We check in once a month with our advisors."*

Scholars were then asked to discuss their experience attending the **study sessions**, with several participants explaining that they have found this activity particularly helpful when struggling with their math coursework. Notably, all responding Scholars juxtapose the program-sponsored study sessions with the college-provided tutoring services, with two describing these supports as complementary and one noting their preference for the study session scheduling.

**Select Quotes:**

*"They're helpful. Last year I was struggling in calculus I and I went to one of those study groups and they taught me some stuff. I also went to tutoring the same week. ... I passed my final and **it really helped me in general, not only in math but also in physics.**"*

*"The study group **definitely helped me with my math and calculus skills.** ... And the tutoring sessions definitely helped me with calculus I."*

*"The study groups are kind of helpful because with tutoring you have to set your own schedule and go with it. But, with the study groups, you just show up and come with any questions you may have. So, **just having that set schedule is kind of helpful.**"*

Participants were also asked to describe one thing they learned from the **first-year semester** that they found particularly helpful during the 2024-25 academic year. Scholars mention a variety of presentation and discussion topics that they have since found useful, such as information regarding upcoming campus events and available student resources, with several highlighting supports offered through Career Services.

**Select Quotes:**

*"That **career services has a closet to borrow from for interviews** in case you have [problems with your] wardrobe."*

*"They introduced us to this one app where you can practice interviews with someone online. ... I've used it for an interview I have coming up."*

*"[Someone] came in to talk to us about events going on around campus. As an incoming freshman, it was really helpful to know things to do to get myself out there, meet new people, keep myself busy."*

*"When we learned about all the resources on campus that can help us be successful. I definitely utilized that. ... Like information on how to get tutoring, how to use databases, the library catalog—stuff like that."*

When asked whether and how they **rely on other Scholars for support**, several participants mention peer study groups—both the program-sponsored study sessions and privately organized groups—as a source of motivation, academic support, and personal accountability, with one explaining that they receive similar motivation from their non-Scholar friends and roommates (see next page for examples).

**Select Quotes:**

*"At the beginning of the school year, **some of us would get together on weekends to study chemistry. Everybody just adds something different, and I think that really helped** in the beginning when I was struggling."*

*"Also, **the fact that we all made to-do lists. Like, everyone saw it and you were held accountable for things,** like [attending] study sessions and whatnot. ... That accountability forces you to actually do the work."*

*"Motivation from friends is a big thing. That's why I like the idea of this study group meeting every Friday, because **seeing each other doing work kind of holds me more accountable.**"*

*"I **use my friends as motivation.** When I see, for example, my roommate studying in the morning, I'm like "Okay, I should probably study a little as well." ... It's the same in classes—**when I see other people working hard, it makes me want to work hard too.**"*

Scholars were also asked to discuss their experience receiving **faculty mentorship** during their time in the program, with many participants highlighting Dr. Shen in their responses and describing how this professor has been particularly supportive, attentive, and reliable with all students in the program. Others recount seemingly unproductive or unsupportive relationships with their assigned faculty mentors, with several explaining that their mentors have seemed too busy to meaningfully engage with their assigned mentees and noting that they regularly turn to other faculty and staff, such as Dr. Shen and their ACE advisors, for academic guidance and support.

**Select Quotes:**

**Supportive Mentoring Relationships**

*"Shen is the first person I go to if I know I'm having any kind of trouble in class. If I know my grades are in danger, I go straight to her and tell her I'm having trouble. **She connects me with who I need to be in contact with, you know, gives me a direct contact.** I don't have to jump through hoops to find advisors or to get in line for tutoring or pay for programs out of my own pocket. **I just have that direct connection and it cuts out a lot of the hassle.**"*

*"I kind of feel like **Ms. Shen is like a family member on campus** that we kind of have to go through. I'm from [out of town] and I don't have family here. I feel like going to her is the closest thing to having family on campus - **her and my ACE advisor.**"*

*"[Shen] is someone close to talk to who personally knows you and knows what you're going through. Especially since it's such a small group. I think **she really knows everyone and all of our needs.**"*

**Unsupportive or Unproductive Mentoring Relationships**

*"I switched majors [and], because of that, I switched advisors. ... **[My first mentor] was never really around,** so I didn't feel like I was getting the attention I needed. It just didn't seem like he cared. **With Shen, there's more consistency.**"*

*"**[My mentor] is busy most of the time,** so whenever he's not available I usually go to my ACE advisor because she would help me out a lot."*



*"[My mentor] has a sort of busy schedule right now, so **it's sometimes hard to contact him**. But when he is available, he's there. **I feel like the one thing you get from your specialized mentor is that they've gone through [the same] college experience**. The know what the paths look like, they can assist you with [specialized] resources for what you want to do or at least guide you to someone who can help."*

Participants were then asked whether they feel Scholars in need of support receive assistance at "just the right time" or "too late," with six of nine indicating the latter. In follow-up, participants were asked **what can be done to ensure that students receive needed support in a timely manner**. In response, most Scholars intimate that it is incumbent upon instructors to keep students informed of their class progress and academic standing by staying on top of assigning and grading coursework, which in turn facilitates timely intervention or requests for assistance. Moreover, several of these participants recommend that SUNY Poly and/or the S-STEM program implement a system that alerts students to issues regarding their academic standing in real-time. In contrast, some Scholars also suggest that it is the students' responsibility to ensure that they are receiving needed support in a timely manner, with several participants sharing their experience seeking direct assistance when faced with an academic challenge.

#### **Select Quotes:**

##### **Instructor Feedback & Intervention**

*"Like I said, [one professor] was on top of me as soon as they saw that [my grade] was dipping a little in one of my classes. I got in contact with them and was out of the classes the same day to improve it. So, I would say **maybe actually issuing written emails or a notice of some kind as soon as the grade dips below a dangerous level**, say a C+, or a certain number of percentage points above or below the grade requirement. Just something physical, tangible."*

*"In high school, there was some system or program that gave me weekly reminders of my grades and just listed each of my grades and any upcoming assignments. Personally, I found that very helpful. If there was something similar that could be done [here], I think that might be good so that you can see if any of your grades are going down."*

*"I think it should be more consistent because sometimes you never see how you're really doing in a class until around mid-terms when they finally start putting in the grades. ... So, just getting grades a little earlier."*

*"The teachers are a big part of the problem. ... I personally had an assignment I spent around eight hours on two months ago and it wasn't graded until it was too late to drop out of the class."*

*"In [one of my classes], we still haven't had a single assignment or grade yet. The only thing that's coming up is our first exam next week and I feel completely lost. ... There like no way of knowing how you're doing. It's not S-STEM's fault, it's not ACE's fault. It's just that some professors don't give any grades. So, you don't know where you stand."*

### Self-Intervention

*"[One professor] helped me figure out when to ask for help and be aware of that. They assured me that it's fine when you face obstacles but that next time, I would have to figure it out, know when to change my [habits]. ... So I think that helped me, just asking for help or what I should do."*

*"Last semester, I did not have a good teacher. She would grade the exams a little too late and when I saw my grade, I was like, 'I'm lost, I have no idea what to do.' So, I went to [another professor] and they gave me good advice, told me what they would do; just gave me next steps on how I could improve."*

### Looking Ahead

When asked what else they need in order to be successful as an S-STEM Scholar at SUNY Poly, Scholars provide a range of recommendations, including additional options for subject-specific tutoring, more off-campus professional development and networking opportunities, and resources to assist students with the financial aid application process.

### Select Quotes:

#### Professional Development & Networking Opportunities

*"It's not needed to be successful, but I do like the conferences and other meetings they offer around the country. For example, when I heard about the conference this Fall, I was very excited and went straight away to ask how I can apply. I just feel like having more of those kinds of things, not even just conferences, would be very nice to have. It would be nice to see something that would help outside of college as well, like maybe some [career-oriented events]."*

*"Maybe just having a connection outside of campus to somebody who's a professional."*

*"I think connections with more engineers that are professionals would help out, because this is a tech school but, for some reason, we only have connections to like three or four [actual] engineers. ... It would be a lot nicer if we had a lot more professional engineers to talk to, whether that be on a call or something. You have to look on LinkedIn or Handshake."*

*"I guess more options for tutoring. Maybe an online tutor for more niche topics."*

#### Other Resources

*"I think something that might help a lot of people alongside the [scholarship] money is like a short cheat sheet on how to go through filing all your paperwork for financial aid. ... All the FAFSA stuff changes per school... how to do it, who to talk to. Maybe just some general deadlines, what to expect, that sort of thing."*

*"I guess more options for tutoring. Maybe an online tutor for more niche topics."*

Additionally, participants were asked what can be done to promote Scholar cohesion within their cohort. In response, several Scholars recommend organizing more engaging group activities that are likely to stimulate conversation and connections between peers, such as industry tours. Others suggest more frequent cohort meetings (weekly or biweekly) or events and activities that incorporate engineering students from across subdisciplines (see next page for examples).

**Select Quotes:**

**Engaging Group Activities**

*"I think **more industry tours would help** out if we could spend some time talking about what we saw. ... **It could be fun and help with cohort building.**"*

*"**Something more engaging to do with each other**, because I haven't seen most of these people since our freshman seminar class."*

**Other Recommendations**

*"Honestly, just **having the meetings every week**. I think if we did it like **every other week in-person that would help too.**"*

*"I would like to see the **civil and mechanical [engineering students] mixed more.**"*

Lastly, Scholars were asked what advice they would give to future S-STEM Scholars before entering the program. Participants variably recommend that incoming Scholars endeavor to form close connections and begin building support networks, stay motivated to meet their goals while carefully monitoring their academic progress, and utilize the range of available campus and program resources.

**Select Quotes:**

**Forming Connections**

*"Be sure to **make close connections with advisors and other students in this program**, as they know what you're going through and can give advice you didn't know you needed..."*

*"**Get together in the first-year seminar class and make a friend group.**"*

*"Have fun, make friends."*

*"Socialize."*

*"Make sure to **be open to meeting new people** and just say hi to people both within and outside of your major. Because you never know when you might need their help or input. It's always nice to have at least one connection outside [your department]."*

**Motivation & Planning**

*"**Stay on track and check your [grades] every so often.**"*

*"It's always better to stay on top of your work, to be ahead than to be behind..."*

*"...Also, stay ahead on your academics, and tutoring actually does help."*

*"**Lock in harder than you think you need to.** If you have straight As before finals, don't slack off. ... Finals means final stretch, don't slack off."*

**Utilizing Resources**

*"Make use of campus resources and make sure you're networking."*

*"**Use tutoring services and all resources to your advantage** because that will help you be successful."*

## Summary & Conclusion

Focus group results reveal that Scholars were motivated to join the S-STEM program for the scholarship funding, community building and professional networking opportunities, and access to program resources. Scholars have, since then, begun forming supportive relationships with their faculty and peers while engaging in a wide range of high impact academic and professional development activities. More specifically, participants primarily consider the personalized academic support provided by affiliated faculty and staff as a top benefit of the S-STEM Program, though testimony suggests that many Scholars rely heavily on a single engineering professor, Dr. Shen, as well as their ACE advisors and SUNY Poly's tutoring services as opposed to their assigned faculty mentors. Moreover, when asked whether they feel Scholars who are struggling receive assistance in a timely manner, many participants share experiences receiving delayed feedback from instructors. They recommend that SUNY Poly and/or the S-STEM Program explore a system that keeps students apprised of changes to their academic standing in real-time.

While Scholars have turned to one another for academic support during both program-sponsored and privately organized study groups, responses suggest that many participants have yet to form strong intra-cohort bonds and would like to see more engaging group activities and more frequent cohort meetings to facilitate Scholar cohesion moving forward. Among the supports and resources probed during the discussion, many Scholars explain that the ACE Program and first-year seminar relayed valuable information regarding campus events and resources, "soft skill" development, and career advice. Other Scholars highlight the standing ACE meetings and SUNY Poly's Career Services as helpful for facilitating advisor access and professional networking opportunities, respectively. Despite the generally positive feedback, when asked what other resources they would like to see offered by the program, most Scholars recommend additional options for subject-specific tutoring and more professional development and networking opportunities, with one suggesting a resource to assist students with federal student aid applications.

Given these findings, the evaluation team offers the following recommendations and reflections for consideration by program leadership:

- **Ensure that faculty mentors are engaged with their assigned mentees**, as many Scholars rely heavily on Dr. Shen and/or have turned to other SUNY faculty and staff for support due to a perceived lack of accessibility, engagement, and/or interest from the assigned mentors.
- **Encourage timely academic feedback from affiliated faculty**, as most participants feel that their instructors are late to assign and grade work which in turn prevents students from seeking needed intervention and guidance. Several Scholars recommend the implementation of a system that tracks Scholars' (or SUNY Poly students') academic

progress in real-time, alerts them to changes in their academic standing, and provides next steps for improvement.

- **Explore events and activities that promote Scholar cohesion**, such as field trips and team building activities, informal social events, or more frequent cohort meetings, as some participants explain that they have yet to form close bonds within the cohort despite a desire to do so and their recommendation that future Scholars do the same.
- **Explore or facilitate additional tutoring resources for S-STEM Scholars**, as several participants would like to see specialized support for various subdisciplines and non-STEM areas, with at least one Scholar recommending an online tutoring option.
- **Encourage Scholars to utilize campus services and resources**, particularly Career Services, as several participants desire additional professional networking and development opportunities through the program that may be available via outside student services.

Consideration of any of these findings and recommendations may help to improve experiences and outcomes for current and future S-STEM Scholars at SUNY Poly.