

A Strategic Program Overhaul: Increasing the Success of Women in Engineering Technology

Leah Mackin, Rochester Institute of Technology (CET)

Leah Mackin is the Assistant Director for Student Belonging and Inclusion for the College of Engineering Technology. In her role, she serves as Advisor for Women in Technology (WIT) a program dedicated to celebrating the success of students in the College of Engineering Technology and beyond.

A Strategic Program Overhaul

Increasing the Success of Women Students in Engineering Technology

Presentation by Leah Mackin, *Assistant Director of
Student Belonging and Inclusion*
College of Engineering Technology
Rochester Institute of Technology

What is WIT?

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This question is the central core of my approach to serving as Advisor to Women in Technology in my role as Assistant Director of Student Belonging and Inclusion. Since July 2023, running the program has been a large component of my workload. I work closely with my direct supervisor, Assistant Dean of Students for the College of Engineering Technology, Dr. Melissa E. Aponte. Many of the efforts implemented were conceived of and executed in collaboration with her, and supported by her guidance and insight from a Student Affairs background.

As I will share in this presentation, students have provided a huge amount of inspiration, influence, and directive on the program. In addition to the student executive board, we are lucky to have a Graduate Assistant for Student Engagement, Rutuja Potdar, to assist with the administrative and day-to-day execution of programming. This presentation will cover the efforts of the last three semesters (Fall 2023, Spring 2024, and Fall 2024) to revive a longstanding, yet up until recently, under-performing platform for the engagement and success of women students in the College of Engineering

Technology at RIT.

What is WIT?



Understanding the Program - Snapshot of the Program

In my first attempts to understand the program, asking the core question, "What is WIT?" served as a way of taking a snapshot.

WIT is a diversity Initiative supported and funded by the College Dean's Office.

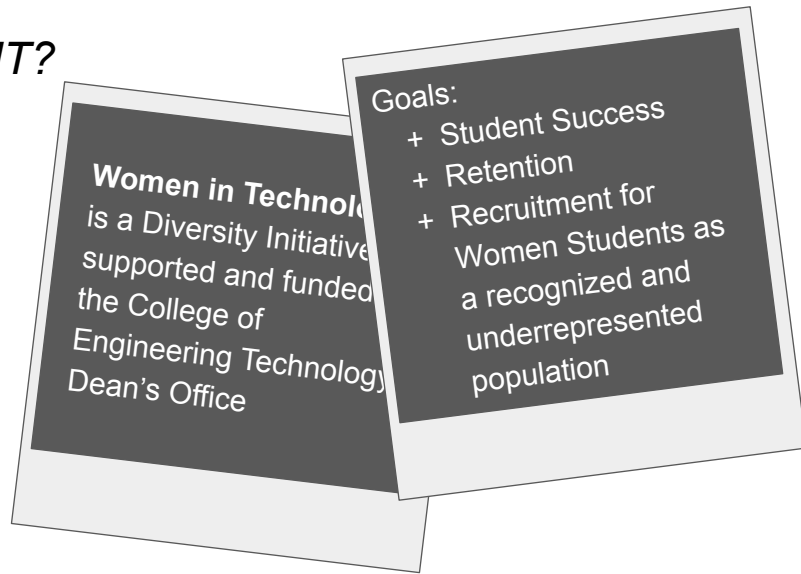
WIT's goal is to support women students, a recognized and underrepresented population within the College.

- Note: The definition of *women* here acknowledges the gender spectrum. WIT, as a program, is open to all current RIT students - it does not discriminate in regard to a student participant's gender identity. Targeted promotion is directed to "women students," a classification that the institution uses in a broad way to lasso any student that does not use he/him pronouns.

I recognize that this is a complicated area in terms of gender expression. I also recognize that the Women in Technology

program does not (and does not attempt to) perform the support that other programs provide at RIT (like the Women, Gender, and Sexuality Resource Center and student-run groups like qSTEM “Queer in STEM”). WIT is one of many resources available to all students at RIT.

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By the numbers...

Fall 2023-2024 Academic Year Undergraduate Students

RIT Overall Undergraduate Student Population	34.8% Women (4904)
College of Engineering Technology	22.1% Women (371)

There are **22.1% women students in the College of Engineering Technology** (371 total women). Overall at RIT, women students make up 34.8% of the total student population.

The campus climate for women is an issue at RIT. Women in Technology stands alongside other “Women in...” Programs supported in different ways by the Colleges and institution overall. Some are faculty-run, some student-run as a Student Affairs sponsored program, some funded by Colleges and staffed (like ours), some funded by the Institute overall. The landscape of all of these different programs can be confusing in some ways for students to navigate.

What is WIT?

Asking (and asking and asking and asking...)

- + Learn the History and Background of the program
 - *What efforts had been done? What worked?*
- + Understanding Leadership History
 - + COVID/post-COVID Challenges
 - + Shift from Women in Technology program to larger DEI efforts focused on AALANA students, first-gen, etc.

Understanding the Program

- + Learning about the History + Background
 - + Women in Technology was started by a group of women faculty members in College of Engineering Technology who recognized their women students needed support
 - + Gathering historical information from these faculty and staff members directly:
 - + What did they find successful? (Events, programs, etc.)
 - + Can they share any/all historical files, information, grant proposals, etc.
 - + What do they want to see from WIT?
- + Leadership Changes over the Years
 - + After 2020, program flatlined due to two major factors
 - + COVID and Post-COVID challenges, inability to maintain engagement via distanced events and virtual
 - + Director of program shifted focus to greater DEI efforts focused on AALANA students, first-generation students - had success maintaining connection to student groups due to strong relationships and personal focus.

What is WIT?

Sent a survey and hosted student focus group in mid-Spring 2023

- + What do you know of Women in Technology?
- + What does it mean to you?
- + How or if you have engaged with programming?
- + What is your gender identity and how does that affect your desire to participate in programming?

Understanding the Program

Led a Student Focus Group in Spring 2023 semester

- + Asked what they knew of WIT, what it meant to them, how/if they engaged

What is WIT?

Response Summary

- Multiple upper-level students (4/5th years) said they participated in WIT Accepted Student Open House Overnight event in 2019, tried to engage with virtual programs in 2020-21 school year, but their attention/bandwidth fizzled
- Students wanted resources, community
- Students suggested collaboration with other student groups and organizations at RIT
- Multiple responses questioned why the program existed (some more antagonistic/dismissive than others)

- + Asked what they knew of WIT, what it meant to them, how/if they engaged
 - + Upper-level students 4/5th years said they participated in WIT Accepted Student Open House Overnight event in 2019, tried to engage with virtual programs in 2020-21 school year, but lost interest. This is a likely familiar example of COVID-fatigued students (and also likely COVID-fatigued staff running the program!)
- + Asked what they wanted from a program like WIT
 - + Resources, community
 - + Collaboration with other groups/student organizations
- + There were elements of “Why is there a program just for women students?” to the conversation, which also presented to me the need for an educational component for the students to understand fully how a program like this can be beneficial to all students.

What is WIT?

Takeaways

- Impact of outreach to prospective/accepted students
- Collaboration suggestion sparked an on-going relationship with a student leader resulting in a successful event, now an annual signature event hosted by Women in Technology
- Specific responses showed the need for an educational component for students to understand issues surrounding gender parity in STEM, at RIT, in the College of Engineering Technology, in their classrooms

Takeaways

- Impact of outreach to prospective/accepted students - Accepted Student Open House events, summer engagement with incoming students, New Student Orientation
- Suggesting collaboration sparked an ongoing conversation and successful collaborative event with student leader, sparking a now signature event
- Specific responses showed the need for an educational component for students to understand issues surrounding gender parity in STEM, at RIT, in the College of Engineering Technology, in their classrooms

The Hand-off: **Dream big!**



In the handoff from the previous Director of the Women in Technology program, she shared a key piece of advice, “Dream big.” I took this to heart and paired it to my personal teaching philosophy as an educator and program facilitator. By empowering students to make key decisions in the trajectory of coursework or a project in the studio classroom, I recognize that they take ownership and responsibility for the success of the work. In the example of Women in Technology, I charged the students with setting the vision, sharing their ideas, and allowed for creative brainstorming to initiate conversation.

Initial Actions in Summer 2023 for upcoming Fall semester

- Created a CampusGroups page
- Participated in resource fair during New Student Orientation
 - Tabled at TigerFest Activities Fair (Club Fair)
 - Participated in Lighting the Way
- Sent Welcome e-mails to all women students in CET
- Invested in SWAG items (Total ~ \$1000)

Actions Taken

1. Targeting First-Year Students
 - a. Recognizing the comments about the Accepted Student Overnight as a welcoming tradition, we wanted to ensure that we were making connection with incoming class of students to our College
 - b. Creating a CampusGroups page - the online portal for Student Activities and Student Organization/Club management
 - c. Participated in the New Student Orientation Move-in Days Resource Fair for new students and families
2. Sending emails to all women students in our College to join the new WIT CampusGroups page
 - a. Previously a newsletter was sent 1-2x month without much context/info about events or program goals
 - b. Clarity in messaging felt paramount
3. Participated in Club/Activities Fair and Lighting the Way, a welcome event for women and non-binary students hosted by Student Affairs

1. SWAG - pens, stickers as promotional items to get the name out

Fall 2023 Weekly Meetings - Invitations to contribute



Hello, hello!

Happy 2nd day of the Fall semester. Women in Technology welcomes you for a **Kickoff Meeting this evening 4:30pm-5:30pm in GOL-1103 MMET Conference Room (just past CTRL+ALT+DELI on your right.)**

We'll do some plotting for the semester's plans, touch base about some first week activities, and enjoy chips+dips+veggies+dips+more!

**Tue, Aug 29, 2023
4:30 PM – 5:30 PM EDT
GOL-1103 / MMET Conference Room**

~~~~~  
*And other events this week in CET and across campus --*

After the meeting, we'll bop over to the [Activities Fair](#)! We'll be posted up in D Lot (or the Gordon Field House if the weather doesn't comply.) Can't make the meeting time earlier or want to learn more about Women in Technology?? Find us there!

We'll be at [Lighting the Way](#) this week. Do you want to join us to help recruit and promote Women in Technology at these events? Let me know - reply to this email!

[ALANA PALOOZA](#) is happening this Saturday, September 2<sup>nd</sup> from 12pm-5pm on Greek Lawn.

In Fall 2023, I began hosting Weekly General Meetings for students

- Core of ~ 20 students in the first month or so
- Brainstorming ideas
  - Recognized the need for a group identity
  - The students asked "What is WIT?"
  - Ideas for hands-on projects
  - Community involvement/outreach to K-12, girl scouts, etc.
  - Sharing what other clubs do (especially as new students checking out different clubs/student groups)

As a full-time staff member, I performed all logistical structure, planning for meetings, and administrative oversight.



## Collaborative Signature Event

September 16, 2023 - End of Week 3

**Women+ in STEM Student Leader Symposium** gathered 25 student leaders to share their club/organizations' plans for the new academic year, connect with other student leaders from affinity groups to learn about ways their groups support one another, participate in networking and professional development workshop, and enjoy lunch together.

Co-hosted by Women in Technology, NERD Girls in STEM, Women in Engineering, Women in Computing



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## Month Three - November 2023

Saw the impact of student autonomy for program

- **E-Board Goal**
  - Defined ways for students to get involved, assume leadership roles
- **Constitution Writing**
  - Decide what they actually want and expect for the program and membership levels
  - Compared to other programs for Women and/or affinity student groups at RIT
- Held successful elections with positions filled by **four first-year students**

### **Students could see the impact of their ideas on the program!**

#### Constitution

- Details what they actually want and expectations for the program, e-board, and membership levels
- Compared to other programs for Women and/or underrepresented students at RIT
- Wrote most of the Constitution together as a group

#### Set an E-Board Goal and Successfully Held Elections

- Defined ways for students to get involved, assume leadership roles
- E-Board comprised of President, VP, Secretary, Treasurer

# Spring 2024 - Student E-Board Established ...Now what?

## **Graphic Identity Project**

- Women in Technology branding and marketing practically non-existent
- Held Graphic Logo Design Contest

## **Collaborations with other student organizations**

- Cross-promotion to different audiences
- Learn from other student leaders

## **Spring Membership Strategy**

- Active membership vs. General Membership
- Volunteer Opportunities
  - K-12
  - Imagine RIT
  - Accepted Student Open House
  - 20th Anniversary events

## E-Board set goals for Spring Semester

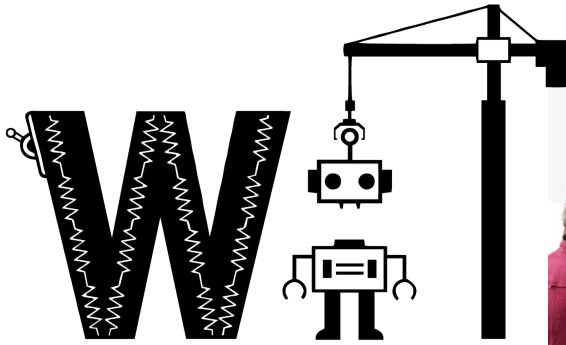
1. Graphic Identity Project
2. Social Activities and Collaboration with other Student Orgs to boost membership
3. **Spring Membership Strategy**
  - Active membership vs. General Membership
  - Volunteer Opportunities
    - K-12
    - Imagine RIT
    - Accepted Student Open House
    - 20th Anniversary events

# The Look and Feel - Considering the Marketing and Brand

**RIT** | College of Engineering Technology  
**Women in Technology**

## Graphic “Logo” and Identifying Details

- Color Scheme
- Brand package
- Complying with institutional design protocols and requirements



Graphic Logo Contest marketed via Instagram to student graphic design groups

- Current students only
- 4 submissions
- Winner received \$50 giftcard and SWAG

Graphic highlights a number of the programs offered in the College of Engineering Technology including Electrical/Computer Engineering Tech, Civil Engineering Technology, Manufacturing and Mechanical Engineering Technology, Packaging Science

# Spring 2024



## Accepted Student Open House

- Evening program rather than Overnight event
- Open to all Accepted Students
- 20 Accepted Students Participated
  - Of the 20, 17 enrolled in Fall 2024 semester in College of Engineering Technology

### Make New Connections

**Women in Technology** invites accepted students to an evening program to **meet our members, connect with faculty, and learn about ways to get involved** with WIT and the College of Engineering Technology.

Space is limited. **Register by March 25, 2024.**



### Event Details

- Date: April 5, 2024
- Main Program: 5–8pm
- Optional Social: 8–9pm

Spring 2024, introduced the Accepted Student Open House Evening program rather than Overnight event.

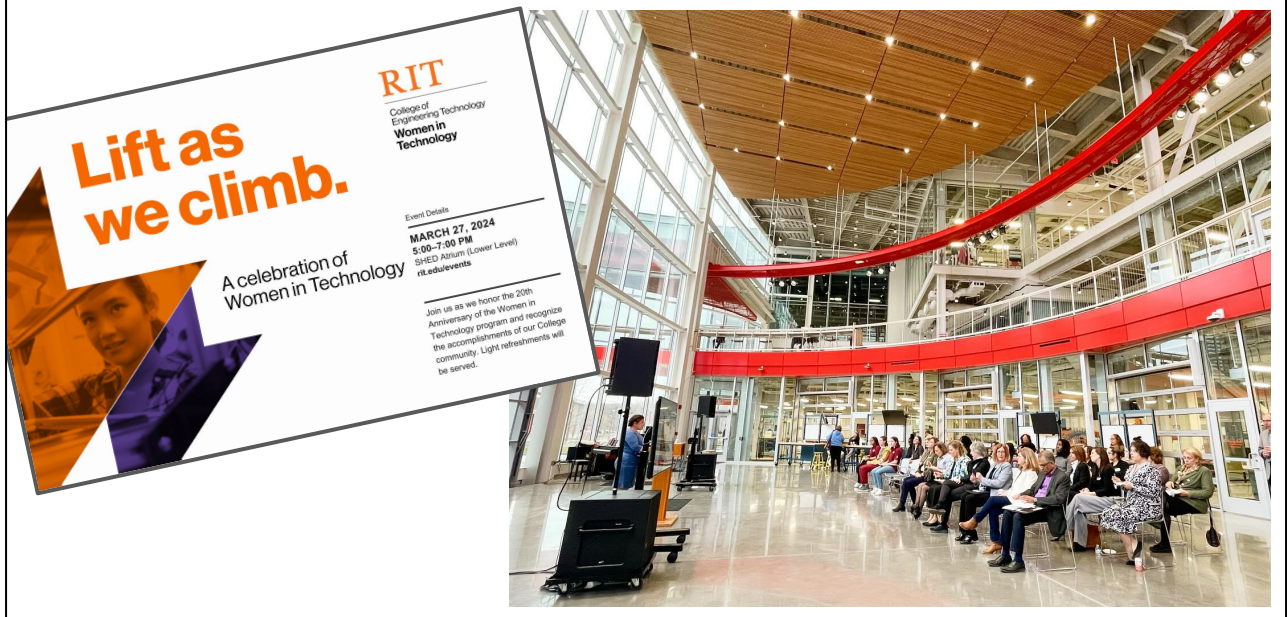
Open to all Accepted Students, invited via email through RIT Admissions

20 Accepted Students Participated

Of the 20, 17 enrolled in Fall 2024 semester in College of Engineering Technology

Program included Dinner with Faculty, Showcase of Projects by Current Students, Co-Op Presentations by Current Students, Optional Social Hour.

## 20th Anniversary of Women in Technology Event



In my initial introduction to the Women in Technology program in Summer 2023, I noted that the program would be celebrating 20 years that next Spring semester. This felt like an opportunity to ride the resurgence and share the progress with the greater RIT community, College of Engineering Technology network, including alumni (targeting alumnae who may have had connection to WIT over the years.) Had guest speakers (two local successful alumnae) and incorporated the event into Women's History Month programming sponsored by the President's Commission on Women (an institutional volunteer group of staff and faculty dedicated to gender parity at RIT for students, staff, and faculty.)

# Spring 2024 Events

## Student-Led Programming

- Professional Development Workshop with Society of Professional Hispanic Engineers (SHPE)
  - Unconventional Game Night Social Event with Queer in STEM (qSTEM)
  - Trivia Night Social Event with Computing Organization for Multicultural Students (COMS)
  - 4 Additional Social Events (Paint n Sip, Therapy Dogs, BINGO night, and Table Talk Slime Night)
- 
- Career Fair Prep Workshop
  - Affinity Networking Reception for Career Fair

Spring 2024, WIT events became more popular and better-attended with direct student-led programming. The E-Board coordinated and executed the following social events paired with General Meetings:

Professional Development Workshop with Society of Professional Hispanic Engineers (SHPE)

Unconventional Game Night Social Event with Queer in STEM (qSTEM)

Trivia Night Social Event with Computing Organization for Multicultural Students (COMS)

4 Additional Social Events (Paint n Sip, Therapy Dogs, BINGO night, and Table Talk Slime Night)

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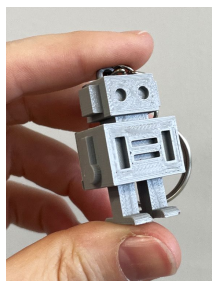


## Summer 2024 -> Fall 2024

- + Communication to incoming first-year women students
- + Hosted two social events for students during New Student Orientation

### Expanded Fall Programming

- Sisterhood Summit, new iteration
- Student Leader Symposium
- Skills-based/technical Workshops (3D Modeling/Printing)
- Elevator Pitch Workshop
- Networking Events with Women Leaders from Canandaigua National Bank
- Tour of Barilla America, Inc.



Over the Summer 2024, we were able to secure incoming women student contacts from Enrollment and participate in communication strategy to incoming first-year women students

Hosted two social events for students during New Student Orientation with attendance of over 85 students at a crafting evening program and 20 students at a more-exclusively/targeted advertising for an off-campus trampoline park experience

E-Board hit the ground running with schedule of General Meetings paired with social events to engage students, including technical/skills-based workshops like 3D Modeling and the second Student Leader Symposium, Sisterhood Summit event. This event included even more affinity groups and was co-hosted by Women in Technology and ECCO Engineers of Color Creating Opportunities. Invited the Expressive Communication Center for two Elevator Pitch Workshops as Career Fair Prep, Networking event with women leaders from Canandaigua National Bank, Manufacturing Facility tour of Barilla America, Inc.



## Fall 2024      New Initiatives and New E-Board

### Introduction of the Women in Technology Project Team

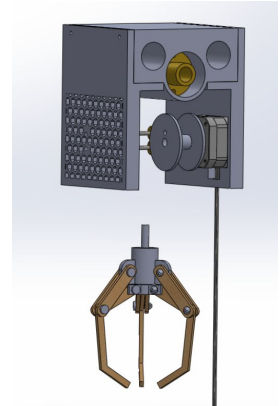
- Create a functional claw-machine with parts modeled, designed and 3D printed and machined
- Exhibit machine at Imagine RIT, huge festival at end of Spring semester



# Project Team

### New E-Board, with Better-defined Roles and Positions

- Re-defined E-Board Roles: President, Vice President, **Operations Manager, Marketing Manager, First-Year Representative, Project Team Lead** (Secretary and Treasurer titles removed)
- Successful second round of Elections!



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## By the numbers...

### Fall 2023-2024 Academic Year Undergraduate Students

|                                              |                    |
|----------------------------------------------|--------------------|
| RIT Overall Undergraduate Student Population | 34.8% Women (4904) |
| College of Engineering Technology            | 22.1% Women (371)  |

Email Communications sent to all women students in CET (including graduate students) ~400 total

CampusGroups has 581 members

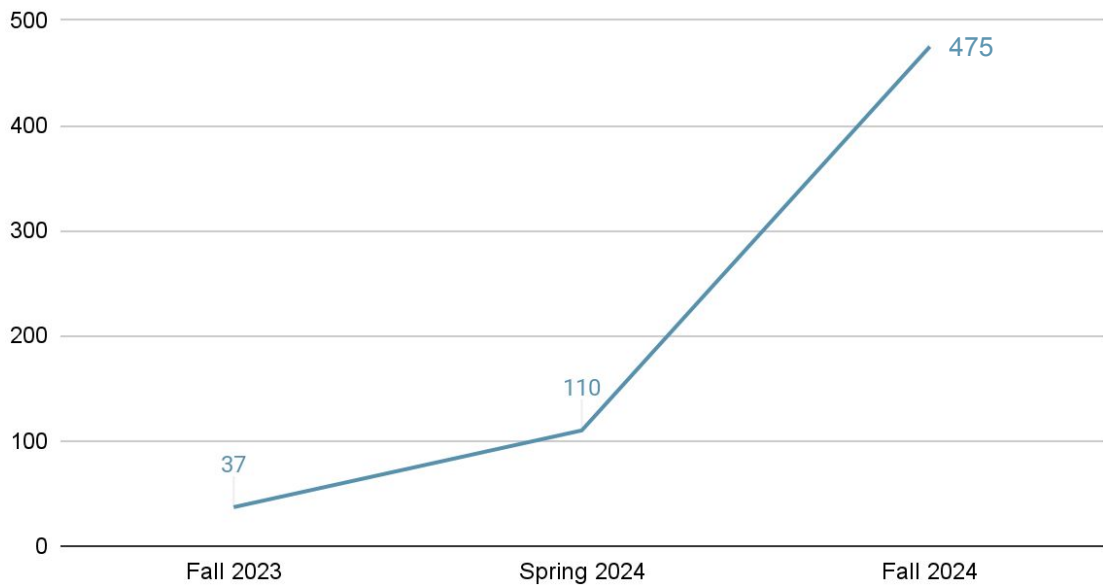
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There are **22.1% women students in the College of Engineering Technology** (371 total women). Overall at RIT, women students make up 34.8% of the total student population.

There are **581 students** in WIT's CampusGroups.

- 
- Email Newsletters are sent to all CET women students ~400 students (undergraduate and graduate.)
- CampusGroups has 581 members
- Instagram has 783 followers

## Women in Technology Student Participants



### Participation Numbers

Last Fall 2023, with the re-launch, 37 students engaged with WIT.

In the Spring 2024 semester, 110 students engaged with WIT.

This past Fall 2024 semester, 475 students participated in at least one event (meeting, workshop, etc.) this Fall 2024 semester.

## Testimonials and Narratives from Current Women in Technology students

- E-board members
- Active members
- Faculty/Staff that have seen the change



testimonials/narratives - in progress - will have by conference (or delete this slide)

## Next steps and future goals...

### Working with Institutional Advancement to Gain Donor Support and Funding

- Currently operating from gift fund
- AY 23-34 spending as model

### Assessment

- Re-issue survey from Spring 2023
- Continue to track engagement in relation to enrollment, retention, and student success

### Continue Empowering Student Leaders

- Graduate Assistant opportunity
- Student E-Board roles evolve as needed



## **Working with Institutional Advancement to Gain Donor Support and Funding**

Currently operating from a gift fund that is not replenished annually. In the AY 23-34, we spent roughly \$10,000 on SWAG, hospitality at events and meetings, room rentals and reservations, professional development. We have created a tiered sponsorship system for different ways individuals or companies can donate to Women In Technology, including sponsorship opportunities for the Project Team.

### **Assessment**

What's the impact? Engagement increasing is great, but long-term tracking of engagement needs to be correlated to enrollment, retention, and student success of women students in the College of Engineering Technology.

Assessment strategies include re-issuing survey from Spring 2023 again in Spring 2025 and more directed programming regarding the experiences and successes of women students in the College of Engineering Technology.

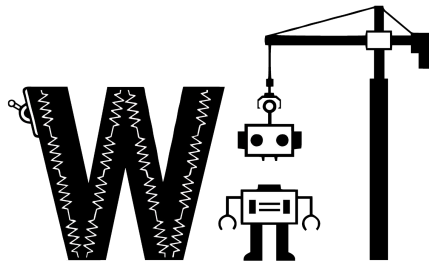
### **Key Takeaways**

Empowering Student Leadership: Importance of student leadership in program

success

Students have been necessary for the successful revival of the Women in Technology program. By introducing the program to prospective students and new first-year students on campus, the women student population is welcomed and the culture of the program is understood. Student Leaders gain experience with teamwork, public speaking, project/event management, and marketing and promotion.

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**Women in Technology**



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