



Modifications for Virtual Activities

There are new challenges associated with holding section events during the ongoing pandemic. SWE sections have found innovative ways to connect members and inspire youth on virtual platforms. Here is an example of a SWE Section that transformed an outreach event that was typically hosted in person to follow new public safety guidelines.

Mystery Design 2017 (In Person)

The Mystery Design event is geared toward inspiring middle school girls on the importance of STEM within their educational and professional life. UCF SWE Section hosted an outreach event in November 2017 on the University of Central Florida campus. 110 students from local schools attended as well as 30 SWE volunteers. The six-hour event was composed of a series of 50-minute activities including:

- A workshop on the basics of circuitry by using conductive playdough to build their own circuits that power an LED lightbulb.
- A workshop on optics through the waves.
- A workshop using biomaterials to encapsulate therapeutics by encapsulating glitter using alginate (derived from seaweed) and calcium chloride.
- Lunch for participants.
- A panel discussion where attendees learned from professional women in STEM fields.
- A Mystery Design Team Egg Drop Challenge.



2017 Workshop Photo



2020 Event Flyer

Mystery Design 2020 (Virtual)

In October 2020, the UCF SWE Section put a virtual spin on the outreach event they had previously hosted. 22 students from local schools and 17 SWE volunteers attended via YouTube live stream. Packages with materials and YouTube live instructions were provided to the event so students and their parents could follow along with the workshops. The two-hour event was composed of a series of 30-minute activities including:

- A workshop making lip balm to demonstrate chemical engineering and sales engineering concepts.
- A workshop making a bridge with gum drops and tooth to demonstrate civil engineering, physics, and materials.
- A workshop making a ping pong launcher to demonstrate projectile and kinematic motion.

Best Practices:

- Focus on hands on outreach activities to keep attendees engaged.
- Connecting with parents can be difficult via email. Consider using multiple forms of communication such as creating groups or events on Facebook.
- Use smaller breakout rooms once the attendees have started the experiments so they can collaborate with other participants and a SWE volunteer.
- Include time for setting up equipment, virtual platform registration, sending reminder emails to attendees, and posting social media reminders prior to starting the live activity.
- Include costs for mailing activity supplies to participants and video conferencing in your budget.

Traditionally in-person events translated to virtual

The PDG committee would like to highlight how SWE sections may be able to transform their traditionally in-person events to a virtual platform in order to follow COVID safety precautions.

In April 2019, the University of California, Berkeley SWE section held an all-day event aimed to create dialogue about gender equity and inclusion in STEM and to teach undergraduate women in engineering communication skills in key areas of diversity and inclusion for school and the workplace. The event included 5 in-person 45-minute workshop activities on: Intersectional Feminism, Gender Inequity Mythbusters, Combatting Imposter Syndrome, Mentorship Lunch, and #IAmRemarkable.

Here's how the PDG committee recommends potentially translating this event to a virtual platform:

- Begin with a presentation or a panel on these topics then provide breakout rooms for small group discussions.
- Come back together at the end to give summaries or takeaways and then any additional resources available for future support and continued development.
- The mentorship lunch in particular would require pre-registration and organization, but could be tweaked based on the availability of different resources/options.
- This summit could also be broken into individual activities offered on different days as part of a development series for easier scheduling.

Other things to think about:

- Virtual events shift the efforts and costs to preplanning -- more advertising avenues for both initial communications and reminders, more discussion before the event to make sure coordinators are in sync and contingencies are addressed. Don't forget about technical considerations, such as clear sign-on instructions, a platform that can handle the goals of the event, and equipment/expertise to make the experience smooth
- Virtual platform events also offer a way to expand section influence to new communities and students. They are a great way to initiate collaboration with other related groups, "By collaborating with other cultural and identity groups on campus in our 'Intersectional Feminism in STEM' workshop, our SWE members were able to recognize diverse perspectives and promote an inclusive community beyond our organization."