The document herein contains the American Society of Mechanical Engineer’s (ASME) COVID-19 safety and risk management policy for its 75th Anniversary Celebration.

# Rules and Regulations

The following rules outlined serve as the rules and regulations needed to be adhered by participants if attending the event:

1. All participants must wear masks that cover both mouth and nose
	1. Mouth and nose must be simultaneously covered at all times [1]
	2. Those masks must be either of the surgical, filtered, or multi-layered fabric type [2,3]
		1. Surgical masks will be made available to those who do not meet the requirements
2. All attendees must complete, pass, and display Dr. Chatbot results [4]
3. Attendees must registered on CCC and display registration
4. Social distancing at a minimum of 6ft apart must occur at all times when stationary [5]
5. No physical contact is allowed between attendees
6. All contact surfaces will be wiped down before and after the event as well as in-between sectioned events with provided supplies from the COVID Event Kit
7. Hand sanitizer from the COVID Event Kit will be made available to all participants if requested.
8. New York State and University of Rochester occupancy and gathering limits must not be exceeded [16]
	1. Loiterers outside the event space will be asked to leave
9. Singing and shouting are not allowed [17]
10. No off-campus guests will be allowed
	1. All attendees must be affiliated with the University of Rochester as a student or employee
11. The following layout and flow of traffic shown [here](https://docs.google.com/presentation/d/1bJKrNWRI7AwRFPiiWROyO_tsTGvcuOsBmzJUf5bcfj0/edit#slide=id.p) will be enforced
	1. <https://docs.google.com/presentation/d/1bJKrNWRI7AwRFPiiWROyO_tsTGvcuOsBmzJUf5bcfj0/edit#slide=id.p>

# Layout and Schedule of the Events

ASME would like to host this event outside on the engineering quadrangle.

No specific timing has been determined for the event but the following highlights will be occurring:

1. Speech by Provost Clark
2. Speech by Dean Heinzelman
3. Speech by Dr. Perucchio
4. Select student and professor research presentations
5. Select senior design presentations
6. UR Baja car reveal
7. Solar Splash and UR Robotics presentations
8. Professor and staff meet-and-greet
9. Talk/Speech on diversity in engineering

If occupancy for this event is determined to be under 200, these events listed above will occur at separate times and require individual registrations to limit attendance and allow the most number of students and faculty to attend the event as possible. Ideally, these individual registrations would be tickets built under an umbrella ASME anniversary event on CCC.

For example:

 Speech by Provost Clark 11:00 AM - 11:25 AM

 Select student and professor research presentations 11:35 AM - 12:00 PM

 Speech by Dean Heinzelman 12:10 PM - 12:35 PM

This will provide complete control of attendance and allow a safe amount of time for attendees and support staff

# Risk Assessment Formula and Derivation

$R = T∙η$

$R = (1-E\_{M})∙A\_{max}∙χ$

$R = (1-E\_{M})∙A\_{max}∙(\frac{ꞵ}{𝛳}) $

$R = E\_{M }∙A\_{max}∙ (\frac{C∙ σ\_{avg}}{𝛳}) $

Definitions

C = # of People w/ COVID on Campus [18]

𝜎 = Average number of people in contact [18]

ꞵ = C \* 𝜎 = # of people who pose a health risk

𝜒 = ꞵ / 𝛳 = % of people who pose a health risk

(Chance of at least one person with covid coming to an event)

𝛳 = # of current students on campus

𝜂 = Amax \* 𝜒 = % Chance of someone who poses a threat comes to an event

Amax = max attendance

T = (1 - EM) \* (1 - EE ) = Transmissibility

EM = (1 - mask efficacy) = Transmissibility through masks [19]

EE = (1 - eye protection efficacy) = Transmissibility through eyes [7]

R = T \* 𝜂 = Risk of Catching COVID

References

[1] <https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/proper-mask-wearing-coronavirus-prevention-infographic>

[2] <https://www.medrxiv.org/content/10.1101/2020.04.19.20071779v2>

[3] <https://advances.sciencemag.org/content/6/36/eabd3083/tab-pdf>

[4] <https://www.rochester.edu/coronavirus-update/health-monitoring-with-dr-chat-bot/>

[5] <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html>

[6] <https://www.cebm.net/covid-19/what-is-the-evidence-to-support-the-2-metre-social-distancing-rule-to-reduce-covid-19-transmission/>

[7] [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31142-9/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2820%2931142-9/fulltext)

[8] <https://www.epa.gov/pesticide-registration/list-n-disinfectants-coronavirus-covid-19>

[9]v<https://www.sterislifesciences.com/products/surface-disinfectants/pharmaceutical-disinfectants/vesta-syde-sq-disinfectant>

[10] <https://www.sterislifesciences.com/products/surface-disinfectants/sporicide-cleaners-and-sterilant/spor-klenz-ready-to-use-cold-sterilant>

[11] <https://www.sterislifesciences.com/products/surface-disinfectants/sterile-hydrogen-peroxide-and-oxidizing-cleaners/hydrogen-peroxide-wfi-sterile-solution-6-percent>

[12]

<https://www.sterislifesciences.com/products/surface-disinfectants/sterile-alcohols/septihol-sterile-alcohol-solution>

[13]

<https://www.sciencedirect.com/science/article/pii/S0738081X20301796?via=ihub>

[14] <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4961531/>

[15] <https://www.atsdr.cdc.gov/mmg/mmg.asp?id=304&tid=55#:~:text=Hydrogen%20peroxide%20is%20poorly%20absorbed,irritating%20and%20may%20be%20corrosive>.

[16] <https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/ConstructionShortGuidelines.pdf>

[17] <https://twitter.com/richdavisphd/status/1276629360212979712>

[18] <https://www.rochester.edu/coronavirus-update/health-and-safety/confirmed-cases-of-covid-19/>

[19] <https://pubs.acs.org/doi/10.1021/acsnano.0c03252>