

The Research Triangle Nanotechnology Network

Convergence Nanotechnology Hub



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Pandemic Lessons Learned: Increasing Accessibility

New Virtual Outreach to Continue Post-Pandemic – Rural Outreach

Girls STEM Power Hour

124 middle and high school girls participated, over 20 girls from two Native American tribes in NC

STEM kits mailed to girls to enable hands-on participation (e.g., DNA extraction)

Effective in reaching diverse populations: black, rural, and indigenous participants

Moving forward, RTNN will run remote and in-person programs to better reach black, indigenous, and rural populations

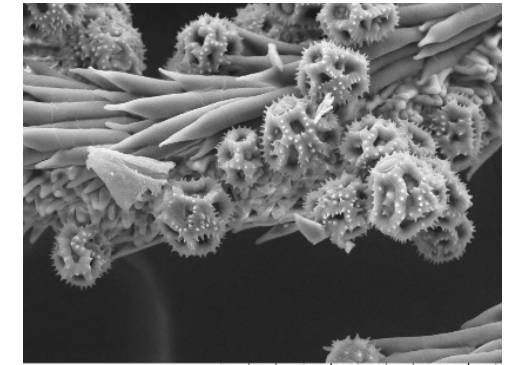
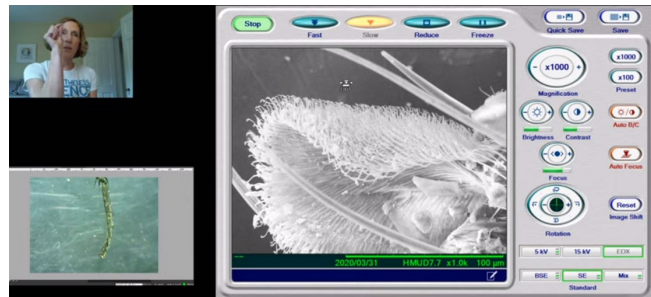
Museum of Life and Science virtual “Field Trip Friday” to the cleanroom

Take-out Science

Themed show streamed on YouTube

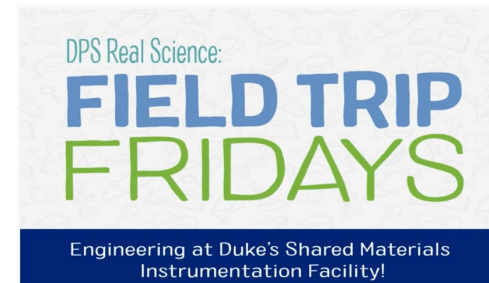
>6,100 total views on YouTube over 14 episodes

Real-time Zoom SEM Sessions with classrooms



RTNN Research Triangle Nanotechnology Network
A partnership between Duke University, NC State University, and UNC Chapel Hill
pequeños pelos y esos pequeños extremos planos. #NSocial

2020/04/01 HL UD7.6 x1.0k 100 μm



Pandemic Lessons Learned: Online content helps both users and facilities



Massive Open Online Course on Coursera, providing education in nanofabrication and nano-characterization
Lectures and in-lab demonstrations in RTNN labs by RTNN students, faculty, and staff from diverse backgrounds

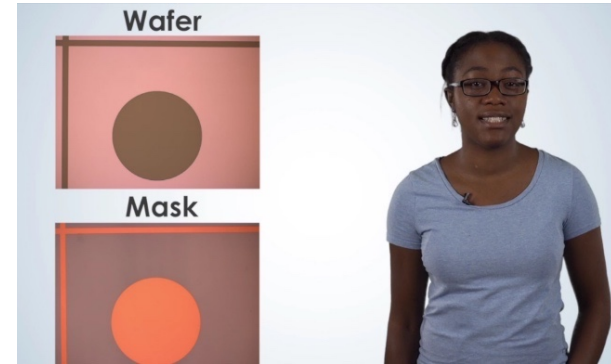
Launched September 2017

- > **45,730** enrolled in course (Year 6: > 10,900)
- > **28,300** active learners (Year 6: > 6,700)
- > **8,100** completed course (Year 6: > 1,900)
- > **222,500** visitors (Year 6: > 61,000)

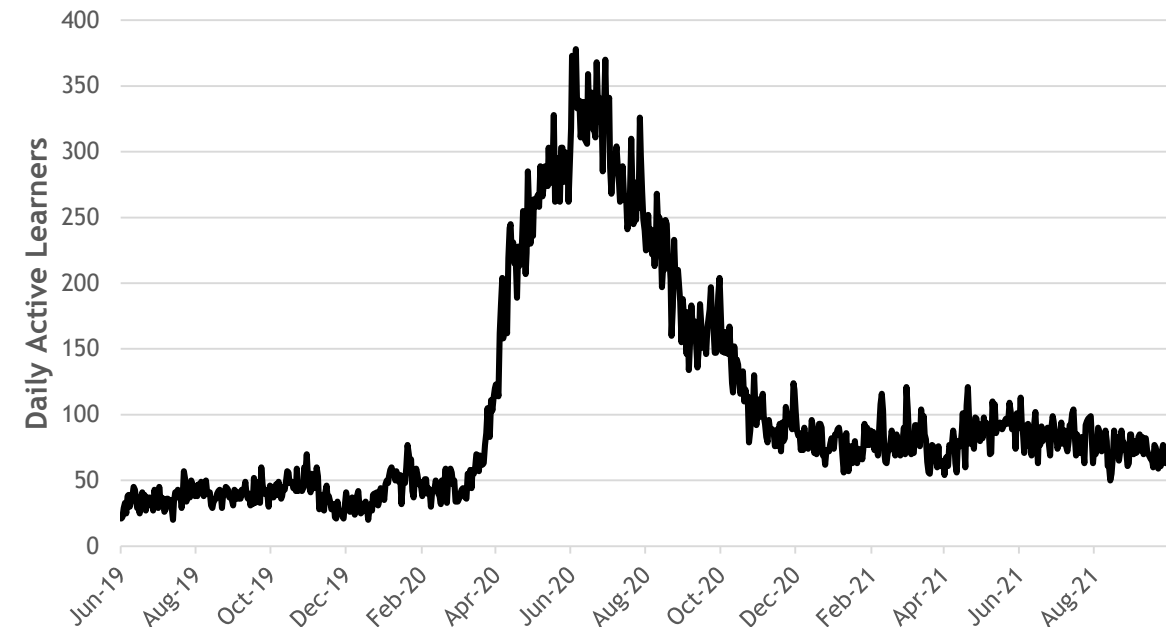
Course increased enrollment during pandemic

Continuing increased number of learners compared to pre-pandemic

Our experience in online content development enabled us to pivot quickly to respond to the pandemic



“demonstration[s] really helpful to visualize all of those experiments since my university is closed due to this pandemic.”



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Assessment

High satisfaction, e.g., course content rated 6.4 on a scale with 7 being the highest

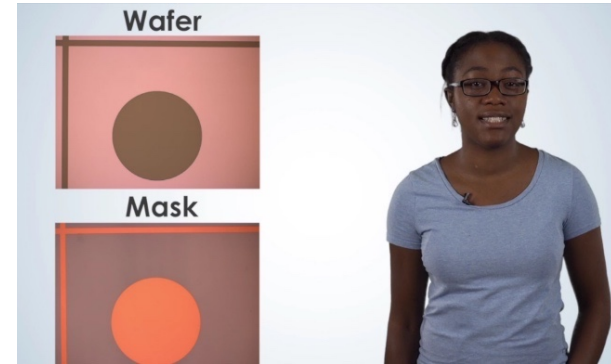
> 90% of respondents “likely” or “very likely” to recommend course

One aim of our Coursera course is to **promote and advance equality of opportunity through diverse presenters and demonstrators**

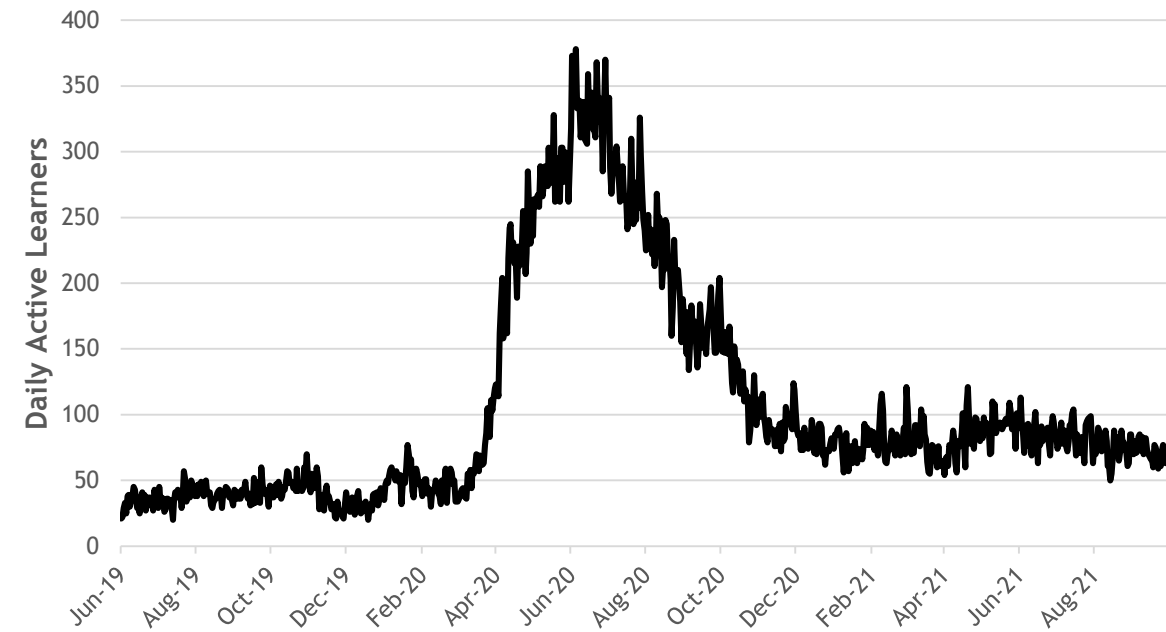
Ensuring that content is **accessible to a broad range of learners**

Continue to assess data from our self-identified ably-challenged learners to better inform development of new modules

New applications modules now in development



“Excellent course! Covering theory and experimental demonstrations with detailed explanation. The course walks you step-by-step to give a clear understanding of Nanotechnology.”



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YouTube Technical Resources to Continue Post-Pandemic

To support a shift to virtual learning and tool training, began developing content and sharing publicly on YouTube

- Introduction to tools and techniques
- Short courses and webinars
- Equipment operation and demonstrations
- Coursera content

>134,200 Year 6 YouTube views
(>173,500 total views)

Moving forward RTNN will maintain and **grow virtual technical resources to raise awareness and support training** of new users

