University of New Hampshire Manchester

Manchester CREATES
Annual Report 2025

Manchester CREATES Builds on Success in Year Two

Dear Friends,

This summer, we celebrated the second year of Manchester Tech Camp and the Manchester Tech for Teachers Institute—and by every measure, both were a great success! As part of the broader Manchester CREATES workforce development initiative, launched just two years ago, these programs are advancing STEM literacy and opening pathways into New Hampshire's rapidly growing bioscience sector. The response has been overwhelmingly positive.

This year, six weeklong programs were offered for middle and high school students, covering topics ranging from human anatomy and microscopy to animatronics and computer coding—all taught through hands-on, project-based learning. Best of all, these programs were offered at no cost to students.

In our Tech for Teachers Institute, seven middle school educators from the Manchester School District participated, with several alumni from last summer returning to assist and teach in the Tech Camp program. Over the course of this two-week paid professional development program, these teachers explored regenerative medicine and biofabrication while engaging with industry experts working on real-world bioscience research.

Thanks to both our Tech Camp and Tech for Teachers Institute, we reached 5% of Manchester's middle and high school students last year—and we're on track to reach even more this year. With support from the U.S. Economic Development Administration's Build Back Better Regional Challenge grant, awarded to the City of Manchester in 2022, we are gaining momentum and having a real impact in our community.

I am deeply grateful to the students, educators, industry partners and supporters who helped make our second year such a success.

Sincerely,

Shannon McCracken-Barber
Project Director, Manchester CREATES

Manchester Tech Camp 2025 Programs

Body Builders

Students explored how the human body works by building functional models of organs and body systems. Combining art and basic electronics, they brought anatomy to life while learning about physiology, engineering and basic programming through a variety of hands-on activities.

Perceptive Plushies

Students explored robotics and animatronics by bringing stuffed animals to life. Using sensors and simple computers, they programmed their toys to respond to light, heat and other stimuli through a variety of engaging, collaborative projects.

TechSplorers

Students participated in daily STEAM challenges designed for curious middle schoolers. From engineering projects and coding experiments to creative arts and hands-on science, each day offered exciting opportunities to engage in creative thinking and problem solving.

Zoom Lens

Students transformed their smartphones into high-magnification microscopes, allowing them to observe everyday objects in fascinating new detail. They also explored 3D modeling and printing, gaining hands-on experience in turning digital designs into real-world creations.

STEM educators who attended the Manchester Tech for Teachers Institute, pictured with program leaders.

Manchester Tech for Teachers Institute

Seven STEAM educators from the Manchester School District participated in the Tech for Teachers Institute this summer, joined by several returning alumni who assisted with the program and taught in the associated Tech Camp.

During the two-week paid professional development program, the cohort worked closely with UNH faculty, graduate students and bioscience industry experts to explore cutting-edge research in regenerative medicine and biofabrication. They also gained valuable strategies from specialists in project-based learning. By the end of the session, each educator had designed a classroom project to implement during the 2025–26 school year.

Open to both individuals and teams, the Manchester Tech for Teachers Institute provides participants with a $1,500 completion award, CEUs, classroom supplies and ongoing support from UNH.

> “Tech for Teachers was more than an inspiring workshop on regenerative medicine and biofabrication—it was highly relevant to research taking place in Manchester. I loved experimenting in the lab and bringing new, hands-on ideas like bioplastics back to my students. This program is well worth your time.”
>
> - Teacher participant

For more information, please contact Shannon McCracken-Barber at **shannon.mccrackenbarber@unh.edu**.

Participants

Hillside Middle School
Kerri Haerinck
Nancy Michaud
Andrew Redlund
Selena Sheehy
Elizabeth Supry

Parkside Middle School
June Ku

Southside Middle School
Jillian Isherwood

Tech for Techers Special Summer Guests

Slawek Antoszczyk of GermSpot, who introduced teachers to bioreactors and yeast applications.

Jay Hoying of Advanced Solutions, who discussed organoids and the company’s cutting-edge work.

Trinity Minard, a student in Dr. Won Hyuk Suh’s lab at UNH Manchester, spoke to teachers about bioprinting and gave a live demonstration.

Nick Rinella from Pfizer, who shared insights on current trends in biofabrication and regenerative medicine.

Manchester CREATEs is funded by a federal Build Back Better Regional Challenge grant awarded to the City of Manchester by the U.S. Economic Development Administration.