



The Roux Institute at Northeastern University

*Prepared for the Joint Standing Committee
of the Maine State Legislature on Innovation,
Development, Economic Advancement and
Business, January 26, 2021*

[The Roux Institute at Northeastern University](#) was established in January 2020 to educate generations of Maine talent for the digital and life science sectors and create new ideas and opportunity through research. Its mission is to develop and scale talent, innovation, & economic impact throughout the State of Maine. The Institute's strategy features graduate-level learning, applied research, and entrepreneurship initiatives, all designed and executed in close partnership with leading employers, universities, and civic organizations.

Launched with the [financial support and partnership](#) of Lewiston-native David Roux and his wife Barbara, the Institute is helping Mainers to create a more prosperous life for themselves and their families through lifelong learning and attracting new talent to the state. In just one year, this exciting vision for Maine and its future has emerged and flourished as reality. The Roux Institute employs 41 Maine-based people and will create and fill an additional 30 Maine jobs by Fall. It operates from a spacious, modern campus in

Portland's Old Port and collaborates with more than 40 corporate, academic, and community partners.

The Harold Alfond Foundation's partnership and financial support has enabled the Institute's mission and impact through its [Alfond Scholars Initiative](#). This transformational initiative provides need-based scholarships, funding for post-doctoral research training, and salaries for learners to work six-month co-op jobs with Maine employers through the Roux Institute. The initiative will fund \$63.4 million in tuition scholarships, \$16.3 million in operations, \$16.1 million in research grants, and \$4.2 million to create 200 co-op positions. During the Institute's inaugural year, 235 Alfond Scholars have been awarded a total of \$3.4 million in scholarship support. To accelerate the Institute's impact and help more Mainers achieve their education and career goals, 1,000 Alfond scholarships will be awarded through Fall of 2022.

The Institute's education programs have served 275 Mainers during its inaugural year. One hundred eighty-one learners are enrolled in graduate certificate and degree programs. An additional 94 have completed custom courses designed with (and funded by) their employers.

This month, 32 co-op learners have begun six-month paid job experiences with 15 Maine employers; 27 moved to Maine to do so. By the close of the academic year, the Institute's certificate and degree population is projected to exceed 225 learners. And more than 300 Mainers will have completed custom, employer-designed courses.

The Roux Institute's research priorities are in three areas of pivotal importance to the emerging tech and life science economy in Maine: Life Sciences & Medicine, Engineering, and Data Visualization. A differentiator in this undertaking is the consistent threading of Experiential (or human-in-the-loop) Artificial Intelligence, meaning that each of these three research focus areas will be nucleated around powerful application of AI. Indeed, the positioning of Northeastern's new Experiential Artificial Intelligence Institute in Portland drives this focus home.

Graduate courses, certificates, and master's degrees in the following areas are offered at the Roux Institute. Each features Northeastern's renowned, [experiential learning approach](#).

<ul style="list-style-type: none"> Computer Science Data Science Cloud Computing Cybersecurity Biotechnology 	<ul style="list-style-type: none"> Bioinformatics Applied Analytics Project Management Virtual Healthcare Supply Chain Analytics
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A commitment to partnership differentiates all Roux Institute initiatives and is at the core of its strategy to be an engine of economic growth. More than 40 corporate, academic, and community partners are now formally engaged with the Institute. They are:

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| <ul style="list-style-type: none"> • IDEXX • Unum • L.L.Bean • Bangor Savings Bank • Bates College • Sun Life Financial | <ul style="list-style-type: none"> • Maine's Public Universities • The Jackson Laboratory • Camden National Bank • MaineHealth • MedRhythms • WEX |
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- Grand Rounds
- Kebotix
- Tilson Technology
- Consigli Construction
- Maine & Co.
- Thomas College
- University of New England
- PTC Inc.
- Retail Business Services
- AlyxHealth
- New England Marine Monitoring
- Martin's Point Health Care
- University of Southern Maine
- MEMIC
- Thornton Tomasetti
- Focus Maine
- Friday App
- Nearpeer Inc.
- Prapela
- Reboot Rx
- Running Tide Inc.
- VETRO FiberMap
- BAKER
- Buoy Health
- MMG Insurance
- Systems Engineering
- Live + Work in Maine

Thirty-one corporate partners work with the Institute to advance talent, innovation, and research, to grow their businesses. The Institute has developed formal enrollment, programming, and research partnerships with five Maine colleges and universities. And its entrepreneurship programs help to retain and attract early-stage businesses, an approach recognized by the state's [Economic Recovery Committee](#) as essential to Maine's future.

There are exciting, early indications of economic impact. Forty-one new, Maine-based jobs have been created by the Institute during its inaugural year. Twenty percent of the Institute's inaugural cohort of graduate learners moved or returned to Maine in-order to enroll. Ten of the Institute's Maine employees and their families relocated to Maine to accept employment.

Establishing opportunities for Mainers to create a more prosperous future for themselves and their families is the most important Roux Institute mission. Together with many others, the following four learners are shaping and investing in their own futures and are representative of the broader learner population at the Roux Institute.

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Learner Profiles



Jacob Ojok

Certificate in Cloud Software Development

From Uganda, Jacob moved to Boston in 2015, then settled in Maine with his wife two years ago. After seven years in IT, he's branched into cloud computing and views machine learning and AI as critical to his professional development. To prepare for this next step, Jacob enrolled in the Graduate Certificate in Cloud Software Development program. He takes evening classes while working full-time as a cloud support engineer in Portland.

Yodit Herrmann, *MS in Biotechnology*

While born in Belize and a true world traveler, Yodit's heart "belongs to Maine" where she's lived since 8th grade, except for four years spent in Ohio for college. She returned to Portland after graduation to work as a research assistant at Maine Medical Center's Myocardial Biology & Heart Failure Research Lab. Yodit was worried she'd have to leave the state to find the right master's program but then discovered the Roux Institute, where she's studying biotechnology.



Amber Heffner Cosby, SVP – Business Intelligence at Bangor Savings Bank

Intro to Data Analytics Custom Course

A seasoned bank leader and dedicated collaborator on the overall Roux partnership, Amber was an eager student in this first custom course and is now helping to design the next course for BSB learners. Amber intends to apply the credits earned in this fall and spring's custom courses into a Masters degree or certificate in analytics at the Roux Institute.

Benjamin Cleveland, Engineering Manager at Tilson, *MS in Biotechnology*

Originally from Auburn, Benjamin joined Tilson in 2014 and today as an engineering manager works cross-functionally to manage complex projects, people, and processes. He took the custom course because he "has a passion for creating efficient workflow processes." After earning six credits in his employer-funded custom course, he's elected to apply those credits to continue his education at the Roux Institute to earn a graduate certificate in Project Management.

