

Building a Model University and Employer Partnership



Lorraine Mountain – Northeastern University, Assistant Dean COE Co-op

Sharon Britton – Northeastern University, Co-op Coordinator MIE

Andrea Cox – GE, Engineering Quality & Compliance Lead and GE/NU University Executive

GE/NU Partnership – A look back at where we started



In 1909 Northeastern started co-op in the engineering program, the second of its kind in the US



GE/NU Partnership Team



**GE University
Executive (UE)**
Andrea Cox

**Campus Recruiting
Leaders (CRLs)**
Andrew Cannella
Lara Easa

Campus Outreach “Before they’re here”

Julie Bernazzani

Ali Childs

- Zubin Joy
- Erica Wotzak
- Tim Stuer
- Rob Cabral
- Doug Lewis
- Lisa Lawless
- Dan Mahoney
- Lisa Burns

EID “While they’re here”

Tim Stuer

Sage Witham

Social Media

Denise Pucilowski

- Tom Stonehouse
- Varun Tarapore

Campus Outreach - Diversity

Juan Mejia

Arthy Bennett

- Kathryn Stafford
- George Luo
- Anthony Hazlet
- Jenny Shipley
- Rob Cabral
- Stephanie Smith
- Hannah Giroux
- Erica Wotzak

Alumni Engagement

Lauren Goldstein

- Sage Witham
- Senna Suzuki



GE/NU Partnership Team



Cooperative Education and Experiential Learning

College of Engineering

- Lorraine Mountain - COE
- Sharon Britton - MIE
- Jake Walker – BioE/ChemE
- Josie Flanagan – ECE

D'Amore-Kim School of Business

- Heather Hauck –Finance
- Ernest Mauristhene – Marketing

College of Computer & Information Science

- Yasmil Montes

Employer Relations and Career Services

- Maria Stein
- Jim Boyle
- Jane Braley

NU Alumni Relations and Development

- John Bowen

NU Center for STEM Education

- Claire Duggan
- Nicholas Fuchs

GE Day @NU



- Annual fall event for targeted student majors based on hiring needs
- Multiple business divisions represented
- Alumni representation
- Entry level program engineers and FMP's also attend
- Mini Career Fair with each business/program represented at a table
- Student registration at all events to stay in touch for future recruiting



Students Majors recruited within College of Engineering and D'Amore-McKim School of Business

COE majors

- Mechanical Engineering
- Industrial Engineering
- Electrical Engineering
- Computer Engineering
- Electrical & Computer Engineering
- Chemical Engineering
- Civil Engineering

DMBS majors

- Finance
- Marketing
- International Business
- Management
- Accounting
- Supply Chain Management
- Entrepreneurship



D'Amore-
McKim

NU Hiring at GE



- Nearly 1200 NU Co-op students hired from 2001 – 2017:
 - College of Engineering
 - D'Amore-McKim School of Business
 - College of Computer & Information Sciences
 - College of Social Sciences & Humanities
 - College of Science
 - College of Arts, Media & Design
- Nearly 100 NU Full time hires from 2010-2016

GE Business Divisions

- GE Aviation
- Baker Hughes, a GE Company (formerly GE Oil & Gas)
- GE Lighting
- GE Capital
- GE Power (formerly Power & Water and Energy)
- GE Transportation
- GE Digital (formerly Intelligent Platforms)
- GE Healthcare
- GE Renewable Energy

GE CAREERS

Big Company Opportunities. Small Business Community.

Managing the Recruiting Process



- Communicate with GE Corporate
- Establish & maintain employer relationships with HR & Engineering Managers from each business division
- Communicate with hiring managers to determine recruitment deadlines, post jobs, coordinate and schedule on-campus and remote interviews and support the hiring process.
- Job postings for each division: students apply through internal database but also apply directly online to GE's site
- But still...“One GE” for GE Day and all on campus activities

GE Campus Presence



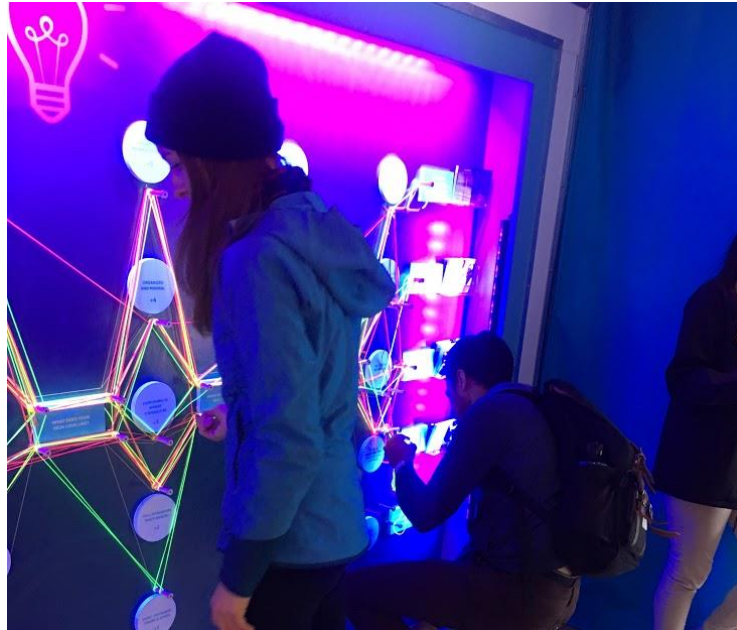
- Market & Promote to targeted population
- GE Information Sessions
 - Overview of GE Aviation, Co-op & Leadership programs for prospective candidates
 - Tour of Lynn Facility
 - Tips on Behavioral Based interviewing
 - 1-1 Resume Reviews & Critiques
- ASME Presentations
 - Jet Engine Operation – 10 years +
 - Behavioral Based Interviewing Tips & Workshop
- Aerospace/Defense Networking Expo
 - Andrea Cox - panelist
- Employer in Residence
- GE Student Ambassadors



GE'S GOAL FOR 2020

**20,000
WOMEN
IN
STEM
ROLES**





#GEBalanceTheEquation

- *All day event featuring interactive installations, networking, speed mentoring, and career quizzes.*
- *Over 600 participants, including NU students, faculty, HS students & parents*

GE/NU Diversity Efforts

- **Society of Hispanic Professional Engineers (SHPE)**

- GE Info Session
- Resume Workshop
- Regional Conference Attendance and Support

- **Society of Women Engineers (SWE)**

- Resume Workshop and Career Discussion
- Networking Events

- **Black Engineering Student Society (BESS)**

- Corporate Series
- GE Info Session
- Resume Workshop

- **Society of Asian Scientists and Engineers (SASE)**

- Networking sessions
- Regional Conference

- **Women in Business (WIB)**

- GE Info Session
- Harvard Women in Business Conference

- **Other**

- Joint Recognition Banquet - NU sponsored
- oSTEM – new club at Northeastern
- Annual GE Aviation Female Diversity Recruitment Leadership Summit
- GE Girls Camp



GE Dare to Lead

- In 2017, Northeastern hosted the leadership workshop on our campus.
- Students engaged in interactive activities focused on helping them to identify strengths and apply leadership & teamwork skills.
- Opportunity to explore engineering career paths (both within and outside of GE).
- Students interacted with GE Leaders and students from other Boston-area schools
- Co-op advisors identified students with leadership potential and reached out directly to encourage them to apply.
- 12 Northeastern students selected to attend the workshop.

Female Diversity Leadership Summit

- Northeastern Co-op faculty identify women with leadership potential who are interested in careers in aviation or at GE.
- Use a targeted individualized approach to encourage students to apply and attend events.



YouTube Video: <https://www.youtube.com/watch?v=SE341LTPwQQ&feature=youtu.be>

GE Aviation Female Diversity Recruitment Leadership Summit

October 19 – October 21, 2017

GE Aviation – Cincinnati, OH

The Female Diversity Recruitment Leadership Summit seeks to identify and recruit highly talented minority female students from a wide spectrum of backgrounds.

GE Girls Camp @Northeastern

in partnership with NU Center for STEM Education



GE GIRLS

@NORTHEASTERN UNIVERSITY

FREE 1 WEEK SUMMER PROGRAM FOR RISING 7th & 8th GRADE GIRLS FROM BOSTON - **JULY 10-14, 2017**

GE Girls is sponsored by General Electric and is a one-week academic day program designed to encourage girls to explore the world of science, technology, engineering and math (STEM), and STEM-based careers.

1 Hands-on Activities

Each day, students participate in hands-on activities that include problem solving, study, research, writing and communication skills.

2 Explore College

Activities are led by Northeastern graduate students and supported by undergraduate science and engineering students and take part on Northeastern's campus.

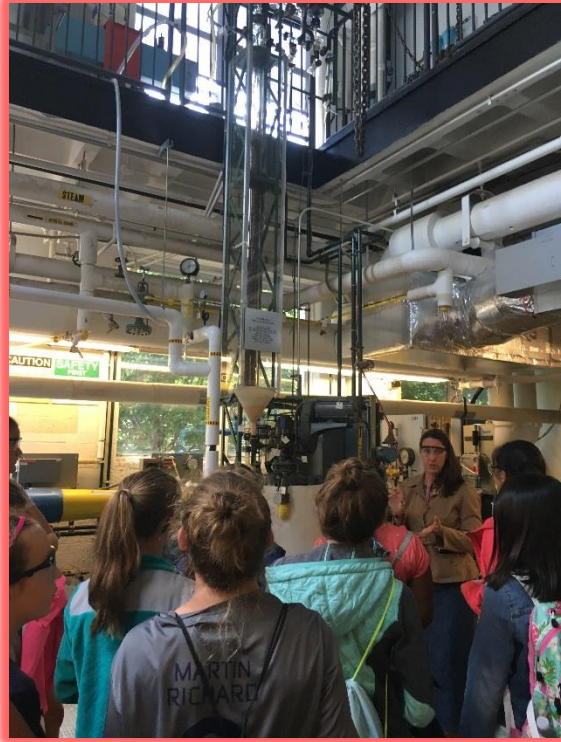
3 Build Connections

Meet GE and NU scientists in engineers working on cutting edge research.

- Day 1 – Intro to Engineering & GE Aviation
 - Design activity, “How things fly”, Paper Airplanes, Paper Rockets
- Day 2 - GE Healthcare
 - “What is healthcare?”, ultrasound imaging activity, NU lab tour
- Day 3 - GE Fieldtrip to Healthcare site
 - Equipment overview, lab tour, imaging
- Day 4 – GE Digital
 - Intro to coding, scratch, robotics
- Day 5 – Student final presentations
 - Student panel, presentations,
 - Assessment, graduation



GE Girls Camp @NU



EQUIP at the

Intersection of opportunity

- **U.S. Department of Education** Accelerates efforts to enable more American workers to secure postsecondary credentials that expressly meet industry needs
- **Northeastern** Creates a new model of education where real world experience earns university credit, removing the divide between work and learning
- **GE** Develops a workforce pipeline prepared and trained to accelerate the transformation to a Digital Industrial company
- **NU / GE** Partnership selected as 1 of 8 university/colleges for DoE initiative



Competency Based Bachelors Degree

Reviving Apprenticeships

- Builds on the foundational legacy of GE's highly successful Apprenticeship programs
- Expands from Northeastern's long proven co-op program and student experiences
- Leverages GE training resources and expertise to develop a application based, relevant job-ready workforce
- Augments the framework throughout with NU faculty expertise, learner supports, and digital learning approaches
- Students earn an accelerated Bachelor of Science in Advanced Manufacturing Systems – first of it's kind in the nation



Partnership Vision:

The integration of work and learning



Grand challenges, similar to a capstone, synthesizing and assessing learning across all accelerators



Accelerators feature rotations through functional shop areas. Integrating digital learning instruction, shop floor practice with real time GE mentoring culminating with challenge assessments



Students complete **foundational learning** consisting of general education requirements and foundational manufacturing topics. Prior learning credits can be applied

2017 Higher Education Innovation and Workforce Development Event in Washington, DC

The intersection of work and higher education in the twenty-first century, exploring topics including experiential learning, Federal Work Study flexibility, apprenticeships, EQUIP, stackable credentialing, etc.



Four-year universities have a role in 21st century workforce development by better aligning with industry and developing innovative education delivery models

“Northeastern hosted a discussion on higher education innovation and the future of workforce development on Monday in Washington, D.C. The panelists—including Chris Mallet, vice president for online programs at Northeastern, Andrea Cox, of General Electric Aviation, and Debbie Hughes, of the Business-Higher Education Forum—examined how higher education and industry can better coordinate to solve workforce development challenges while closing the skills gap. Attendees—among them workforce leaders and education policy advocates—heard about the importance of experiential learning as well as Northeastern’s innovative partnership with General Electric Co.”

NU/GE Aviation Hackathon Challenge

Feb 10-12, 2017



Participants: 50 Computer Science and Engineering Masters & PhD students

Challenge Timeline: ~30 hours

GE Team: 6 on-campus and 2 offsite GE team members

Challenges: 4 Projects included “Export/Import Databases”, “Collaboration Tools”, “Commercial Invoice Validation”, and “Find my Authorization”

11 solutions ... 4 awards

- Most Impactful - Export Classification Audit Tool
- Best Quick Hit – AES Filing Automation
- Best Presentation – EXIM Chat Bot
- Deepest Dive – Secure Collaboration Architecture



Northeastern Analytics Project

What it is → Masters Program in Data Analytics looking for corporate partnership opportunities to get Analytics & Visualization experience with real world data

Benefit for GE

- Masters Students analyze trends & create new viz's
- Opportunity for future projects
- Free & Flexible to meet corporations' needs

Current Scope: Cyber Security alerts data

Goals

- ✓ Weed out false positives
- ✓ Create a continual learning "loop"
- ✓ Added sophistication in alert process

Course Outline

ALY 6000 – Introduction to Analytics (*Fall B*)

ALY 6030 – Data Warehousing & SQL (*Fall B*)

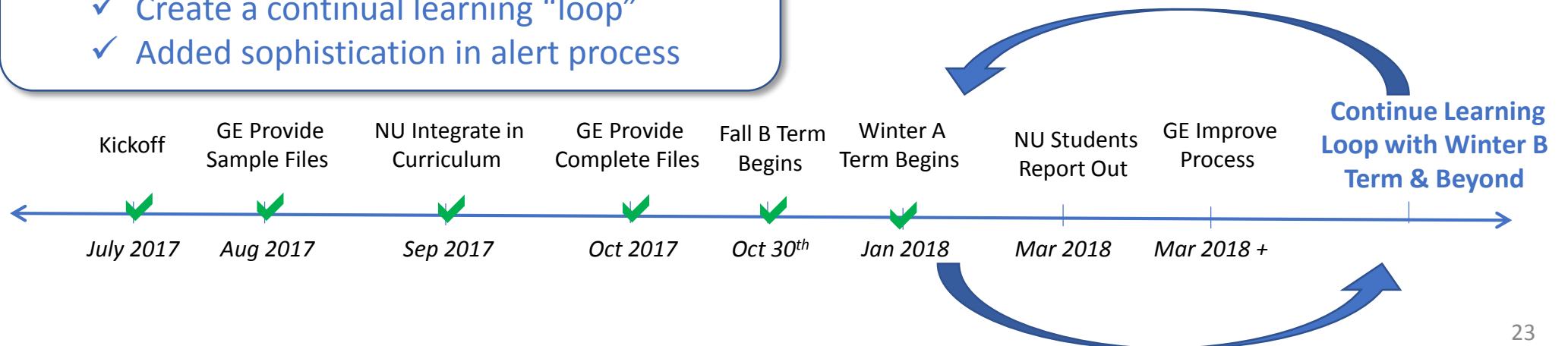
Build
Foundation

ALY 6015 – Intermediate Analytics (*Winter A*)

ALY 6070 – Communication & Data Viz (*Winter B*)

ALY 6020 – Predictive Analytics (*Winter B*)

Produce
Results



Alumni Outreach at GE

- Employer-In-Residence

Volunteer a few hours one day to meet students and answer questions about your business. Can be done in person or via Skype!

- GE Day

GE-Specific career fair showcasing the variety of things we do

- Student Group Outreach

Attend events held by ASME, WIB, SWE, SHPE, and more such as resume critiques, employer panels, mock interviews, etc

- Current Co-op Outreach

Be a co-op Buddy for your site, represent your business in monthly Connect & Learn sessions, help us host a Co-op welcome event!

- Social Media, Alumni Newsletter

Help us cultivate yammer/LinkedIn presence to attract talent, and keep other alums informed of the latest events!



Engaged alumni are the key to building a successful partnership team!