Important Dates

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Winter 2018 Registration Begins</td>
<td>Oct 2</td>
</tr>
<tr>
<td>Last day to resign</td>
<td>Nov 11</td>
</tr>
<tr>
<td>Fall Recess</td>
<td>Nov 22-25</td>
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</tbody>
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Events & Campus Opportunities

**Internship Announcements**

NASA Pathways Interns. NASA Goddard Space Flight Center will be posting vacancy announcements for Pathways Intern engineering positions from September 18-25. Applications will be available at USAJobs.gov to begin work Spring 2018. See attached.

**Training Opportunities**

LEED Green Associate (GA) Training
Want to get involved in sustainability? Opportunities are plentiful and LEED is at the forefront! LEED (Leadership in Energy and Environmental Design) is simply a sustainability scorecard for green buildings. The LEED Green Associate is the only professional designation to show employers and clients you have certified knowledge in the field. See attached. To register for the class visit leadinggreen.com/buffalo.

To post to the weekly bulletin, contact Brittany Sandor at bsmetank@buffalo.edu
We are pleased to announce our September meeting:

Student Night: Tour of the Baker Chilled Water Plant

This meeting is open to all ASHRAE participants and all UB Students. Current ASHRAE members are encouraged to attend to show support for our Student Chapter.

Date: Wednesday, September 20, 2017
Tour begins at 5:00 pm
Optional Dinner to follow

Tour Location: Baker Chilled Water Plant
University at Buffalo, North Campus
Service Center Rd (just past the solar array)
Parking on north side of Service Center Rd

Dinner Location: Duff’s Wings
3651 Sheridan Dr
Amherst, NY 14226

Tour Details: Come join the ASHRAE Student Branch Wednesday evening for a tour of the Chilled Water Plant on North Campus! The Baker Chilled Water Plant provides cooling to most of the buildings on North Campus, and has a capacity of 168 million BTU’s per hour, (equivalent of 21,000 window units). The tour will show the equipment of the district cooling equipment and the central control systems that run the HVAC equipment of the campus buildings. There will be general discussions explaining the systems. Come and see what keeps UB cool!

Don’t forget to RSVP on google forms here!

CHAPTER MAY NOT ACT FOR THE SOCIETY
American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

AN INTERNATIONAL ORGANIZATION
Engineer Alley
at UB Bulls Football

UB Bulls vs. Florida Atlantic Owls
Saturday, September 23rd – 3 hours before kickoff

ALL SEAS STUDENTS WELCOME!! Event includes food, drinks, giveaways, lawn games and more under our tailgate tents in front of Bissell Hall. Game ticket info below.

SEAS CLUBS—WIN FREE $$$$$!

How? The club with the most members in attendance will be awarded $ a prize $ courtesy of the UB Engineering & Applied Sciences Alumni Association. Previous winners include ESW, ASCE, SWE, NSBE & more.

REGISTER BY SEPTEMBER 18th AT: Engineering.buffalo.edu/football
Attendance taken via student ID

Questions? Call 716–645–2133 or your professional organization
Email: EngineeringAlumni@buffalo.edu

Sponsored By:

UB ALUMNI ASSOCIATION
ENGINEERING AND APPLIED SCIENCES
NASA Goddard Space Flight Center (GSFC) is embarking on new missions and seeking fresh ideas! Don’t miss out on the opportunity to join the NASA team and develop cutting edge job skills in Science, Technology, Engineering, and Math (STEM), as well as Business fields. NASA is consistently recognized as one of the best places to work in the Federal government.

Pathways Internship Employment Program (IEP) opportunities are open to current undergraduate and graduate students. The IEP is a flexible cooperative education experience that allows students to work as federal employees while attending school. We offer full or part time work schedules for students attending school on at least a half time basis (following your school’s definition).

GSFC will be accepting applications via USAJobs on September 18th for Pathways IEP opportunities. We are seeking students who can begin working in Spring 2018.

U.S. Citizenship is required. If you are not a U.S. Citizen, please visit: http://nasajobs.nasa.gov/jobs/noncitizens.htm

**GSFC Locations**

- Goddard Main Campus, Greenbelt, MD
- Wallops Flight Facility, Wallops, VA
- Independent Verification and Validation Facility, Fairmont, WV
- Goddard Institute for Space Studies, New York, NY

**Engineering and Technical Majors**

- Goddard Main Campus, Greenbelt, MD
- Wallops Flight Facility, Wallops, VA

**Business and Related Majors**

- Goddard main campus, Greenbelt, MD
- Wallops Flight Facility, Wallops, VA
One Stop Shopping Initiative
One NASA System • One Submitted Application • One Amazing Opportunity

OTHER OPPORTUNITIES: NASA’s Office of Education sponsors seasonal opportunities including internships, fellowships and scholarships. If you are interested in non-federal service student research-based science, technology, engineering and math (STEM) opportunities (e.g. 10-week summer assignments) sponsored by NASA’s Office of Education, apply directly at: intern.nasa.gov.

U.S. Citizenship is required. If you are not a U.S. Citizen, please visit http://intern.nasa.gov/non-us-opportunities/index.html

For more information on NASA Goddard Space Flight Center, visit the following website: http://www.nasa.gov/centers/goddard/home/index.html

For more information on NASA Goddard’s Wallops Flight Facility, visit the following website: http://www.nasa.gov/centers/wallops/home/index.html
LEED® GREEN ASSOCIATE TRAINING

LEED (Leadership in Energy and Environmental Design) is simply a sustainability scorecard for green buildings. The LEED Green Associate is the only professional designation to show employers and clients you have certified knowledge in the field.

-COURSE INCLUDES-
- 400 Realistic practice exam questions
  Updated to LEED V4
- Class recordings and anytime assistance from our LEED AP+ Staff
- Comprehensive study guide designed to prepare you for exam success
- In-class instruction covering LEED overview and detailed exam preparation including tips to registering

-COSTS-
- $200 For full time students
- $300 Non-students
  (Comparable courses start at $700)
Introduction to sustainability in the 21st century
- Description of the causes and effects of climate change due to global warming
- Highlighting the distinction between energy production and consumption
- The built environment as the largest consumer of energy and producer of greenhouse gases

Introduction to LEED (Leadership in Energy and Environmental Design)
- How LEED is used to reduce the footprint of our built environment
- How LEED contributes to a more economical building and healthier lifestyle for its occupants
- Who created LEED and what is the process to certify a building including the point system
- The tools and standards incorporated into LEED which result in a holistic green building standard
- How to market yourself as a LEED professional and understand LEED impact categories

Location and Transportation
- How to reduce your building’s impact on the environment due to automobile dependence
- Incorporating your building with existing infrastructure and public transportation
- Where to build the project in order to reduce its environmental impact and halt urban sprawl
- How to select the correct project site to maximize LEED points and mitigate environmental impact

Sustainable Sites
- The benefits of open space on your project site and having occupants interact with said space
- Reduction of storm water runoff and curbing the heat island affect to reduce cooling loads
- How to reduce light pollution to minimize energy loss and off-site disturbances

Water Efficiency
- How to reduce potable water consumption by installing low flow fixtures and reusing water
- The benefits of properly monitoring your water consumption and possible incentives
- How to reduce potable water use for irrigation and treat waste water on site

Energy and Atmosphere
- Using building modeling software and on-going metering to estimate and record energy usage
- How to reduce energy losses from the building and how to source energy from on/off-site renewables
- The necessity of building commissioning and refrigerant management for LEED

Materials and Resources
- How to reduce construction demolition waste and allow for occupant recycling when occupied
- LEED’s Building product disclosure and optimization unique approach for material selection
- The function of Environmental Product Declarations and benefits of local materials

Indoor Environmental Quality
- How to reduce indoor air pollution to increase occupant comfort, health and productivity
- How points are awarded for lighting and thermal control and comfort
- How to incorporate daylight and views to positively contribute to the indoor environmental quality

Innovation in Design and Regional Priority
- How LEED rewards sustainable strategies which are out of the scope of LEED
- How to receive exemplary performance points for exceeding existing credit requirements
- How LEED rewards points for satisfying credits of utmost importance to specific regions

Exam registration, materials overview and Exam taking tricks
- How to self-study for the exam and the exact procedure to ensure the highest passing rate
- How to register with the USGBC and find the best location to take the exam
- How to use the most effective strategy during the exam
**What is Sustainability?**

"Meeting our NEEDS, and the NEEDS of future generations"

The Triple Bottom Line is the key to sustainable design and construction ensuring that the wants and needs of the environment, economy and society are all satisfied.

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**What is LEED?**

LEED stands for Leadership in Energy and Environmental Design and is simply the definition of a green building. The more sustainable the building is the higher level of certification.

LEED is a point based rating systems and depending on the number of points you achieve, you will be awarded. These points are earned through meeting credit requirements in LEED and there are 6 Categories in which to earn credits. LEED is a holistic building approach to sustainability by recognizing performance in five key areas of environmental performance:

1. Sustainable Site Development
2. Water Efficiency
3. Energy Efficiency
4. Materials Selection
5. Indoor Environmental Quality
6. Innovation

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**Why Choose LEED?**

- **Proven Performance** – LEED certified buildings save money over time through energy conservation, reduced water consumption and increased property value.
- **Environmental Responsibility** – LEED is synonymous with sustainability and is the premier way to demonstrate your willingness to make a difference for future generations.
- **Short-term Return** – LEED means green as in sustainability, not for your pocket book. Its low initial cost premium yields high returns on investment which have faster lease-up rates and can free up potential financial incentives.

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**LEED and it’s Merits**

**Market Demand**

According to the World Green Buildings Study, market demand for green buildings continues to rise from 33% of individuals and tenants as well as 35% client demand in 2012.

**Operations and Maintenance Costs**

Buildings are the largest consumer of energy and electricity. While utility prices rise it is essential to consume less and save more. LEED utilizes an integrative approach which encourages interaction of all stakeholders early on in the project to find synergies between them. This results in an optimal design in the most cost-effective manner which is the benchmark of sustainable building design.

**Competitive Advantage**

Today, more than ever LEED differentiates you from conventional buildings. It is a strong marketing tool that encompasses your green efforts into a single recognizable word. Those who do not build LEED will be left with a building that does not appreciate as fast as others.

**LEED Buildings yield:**

- Average ROI: 9.9% (New), 19.2% (Existing), Reduced Operation Costs: 13.6% (New), 8.5% (Existing) Increased Building Value: 10.9% (New), 6.8% (Existing) Higher Occupancy rates: 16% - 18% higher than non-rated. Robust Tenants: Green buildings retain their occupants at consistent rents through economic trials (IE. 2007-2009)
ABOUT THE INSTRUCTOR

Lorne Mlotek BASc., LEED AP BD+C, O+M

Lorne Mlotek is a graduate in Civil Engineering from the University of Toronto, where he specialized in building science and integrated design. Over the past 7 years Lorne has gained experience in the green building industry by working as a sustainability consultant with Smith and Anderson Footprint, as a developer with Provident Energy Management, a division of Tridel, and with Morrison Hershfield as a designer. Lorne has acted as an engineering consultant on over 25 sustainable projects pursuing LEED, Energystar and BOMA BEST certification.

Currently Lorne owns and operates LeadingGreen Training and Consulting whose mission is to help students and professionals circumvent the financial barriers of sustainable education. Over the past four years Lorne has taught energy modeling, building science and over 170 LEED training courses to over 8000 people with great success, as everyone who has taken their LEED GA or AP+ exam has passed. Lorne has also partnered with over 100 post-secondary institutions and companies across North America to present about sustainable topics to their students. Lorne believes that increased education will lead to greater market demand for green buildings, the recognition of their financial merits and growth in green collar industries and is currently working on a recruiting company specializing in sustainable opportunities.

OFFICE ADDRESS:
B740 Sandford Fleming Building, 10 King’s College Road, Toronto ON M5S 3G4
E-mail: info@leadinggreen.com

<table>
<thead>
<tr>
<th>Price ($)</th>
<th>$200 (students)</th>
<th>$700+</th>
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</thead>
<tbody>
<tr>
<td>Length (Hours)</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Mock exams provided (#)</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Taught by LEED AP+ Instructors</td>
<td></td>
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<tr>
<td>Unique Online Realistic Mock Exams</td>
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<tr>
<td>Class Video Recordings Provided</td>
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<tr>
<td>Letter of Attestation for LEED Project Experience</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Study Materials Provided</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>100% Exam Pass Rate</td>
<td>✓</td>
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