

This Design Standard has not yet received approval through University governance. It is included here as a reference for planning new facilities to be built in the near future.

1. New Construction

- a. At a minimum, all new buildings* shall be designed to meet the Toronto Green Development Standard, Tier 1 and LEED Canada – NC Silver rating with at least 10 points achieved for “Optimizing Energy Performance”, 2 points achieved for “Enhanced Commissioning” and 4 points achieved for “Water Use Reduction”. This will significantly reduce the building’s operating costs over its lifetime. The attached chart indicates the University’s minimum point expectation in all categories.
- b. It is recommended that the building undergo full LEED Canada – NC Silver certification, not just be designed to be equivalent to LEED without certification. This will ensure that features planned at the beginning of the project to enhance the environmental sustainability of the building will still exist at the end of the construction, will be properly commissioned and will be monitored for performance after the construction is complete.
- c. It is recommended that glazing be limited to no more than 40% of the exterior wall area.
- d. Equipment and systems must be put in place so that the long term energy and water efficiency can be monitored and verified.

2. Major Renovations

- a. For major renovations requiring governance approval affecting 100% of the mechanical and electrical systems and 50% of the interiors, the re-constructed area shall be treated as “New Construction” above.

3. Related Relevant Documents

- a. Other University of Toronto Design Standards can be found at <http://www.fs.utoronto.ca/aboutus/design.htm>. Of particular relevance are the Mechanical and Electrical Design Standards.
- b. *A Pledge from the Executive Heads*, Council of Ontario Universities, November 2009 <http://www.cou.on.ca/issues-resources/key-issues/more/pdfs/committed-to-a-greener-world---a-pledge-from-execu.aspx>

* = Wet labs and data centre buildings will be considered on an individual basis.

UofT Environmental Design Standard for New Construction
based on LEED Canada 2009

Min. point expectation		Sustainable Sites	Possible LEED points
R	Prereq 1	Construction Activity Prevention	R
1	Credit 1	Site Selection	1
5	Credit 2	Development Density and Community Connectivity	3,5
0	Credit 3	Brownfield Redevelopment	1
6	Credit 4.1	Alternative Transportation - Public Transport Access	3,6
0	Credit 4.2	Alternative Transportation - Bicycle Storage & Changing Rooms	1
0	Credit 4.3	Alternative Transportation - Low-Emitting and Fuel Eff. Vehicles	3
1	Credit 4.4	Alternative Transportation - Parking Capacity	2
1	Credit 5.1	Reduced Site Disturbance - Protect/Restore Habitat	1
0	Credit 5.2	Reduced Site Disturbance - Maximize Open Space	1
1	Credit 6.1	Stormwater Management - Quantity Control	1
0	Credit 6.2	Stormwater Management - Quality Control	1
1	Credit 7.1	Heat Island Effect - Non-Roof	1
1	Credit 7.2	Heat Island Effect - Roof	1
0	Credit 8	Light Pollution Reducutor	1
17		points	26
		Water Efficiency	
R	Prereq 1	Water Use Reduction	R
2	Credit 1	Water Efficient Landscaping	2,4
0	Credit 2	Innovative Wastewater Technologies	2
4	Credit 3	Water Use Reduction	2to4
6		points	10
		Energy & Atmosphere	
R	Prereq 1	Fundamental Commissioning of Building Energy Systems	R
R	Prereq 2	Minimum Energy Performance	R
R	Prereq 3	Fundamental Refrigerant Management	R
10	Credit 1	Optimize Energy Performance	3to19
0	Credit 2	On-site Renewable Energy	1to7
2	Credit 3	Enhanced Commissioning	2
1	Credit 4	Enhanced Refrigerant Management	2
1	Credit 5	Measurement and Verification	3
0	Credit 6	Green Power	2
14		points	35
		Materials & Resources	
R	Prereq 1	Storage & Collection of Recyclables	R
0	Credit 1.1	Building Reuse: Maintain Existing Walls, Floors, Roof	1to3
0	Credit 1.1	Building Reuse: Maintain Interior Non-Structural Elements	1
2	Credit 2	Construction Waste Management	1to2
0	Credit 3.1	Materials Reuse	1to2
2	Credit 4.1	Recycled Content	1to2
1	Credit 5.1	Regional Materials	1to2
0	Credit 6	Rapidly Renewable Materials	1
0	Credit 7	Certified Wood	1
5		points	14
		Indoor Environmental Quality	
R	Prereq 1	Minimum IAQ Performance	R
R	Prereq 2	Environmental tobacco Smoke (ETS) Control	R
0	Credit 1	Outdoor Air Delivery Monitored	1
0	Credit 2	Increased Ventilation	1
1	Credit 3.1	Construction IAQ Management Plan, During Construction	1
0	Credit 3.2	Construction IAQ Management Plan, Testing before Occupancy	1
1	Credit 4.1	Low-Emitting Materials: Adhesives & Sealants	1
1	Credit 4.2	Low-Emitting Materials: Paints & Coatings	1
1	Credit 4.3	Low-Emitting Materials: Flooring Systems	1
1	Credit 4.4	Low-Emitting Materials: Composite Wood & Agrifibre Products	1
1	Credit 5	Indoor Chemical & Pollutant Source Control	1
0	Credit 6.1	Controllability of Systems: Lighting	1
0	Credit 6.2	Controllability of Systems: Thermal Comfort	1
1	Credit 7.1	Thermal Comfort: Design	1
0	Credit 7.2	Thermal Comfort: Verification	1
0	Credit 8.1	Daylight & Views: Daylight	1
0	Credit 8.2	Daylight & Views: Views	1
7		points	15
		Innovation & Design Process	
4	Credit 1	Innovation in Design	1to5
1	Credit 2	LEED Accredited Professional	1
5		points	6
		Regional Priority	
1	Credit 1	Durable Building	1
1	Credit 2	Regional Priority Credit	1to3
2		points	4
		LEED CANADA 2009 NC minimum:	
		LEED Certified 40-49	
56		LEED Silver 50-59 110	
		LEED Gold 60-79	
		LEED Platinum 80-110	