Green Buildings (at UM)

- Buildings fundamentally affect people's lives & the health of the Planet
- In the United States, buildings use 1/3 of our energy, 2/3 of our electricity, and 1/8 of our water, produce 30% of greenhouse gas emissions.
- How much of the Planet's resources are used to make the products buildings use?
- Is there a different way to construct our buildings other than "business as usual"? One that saves energy, saves resources, is sustainable, improves the health & lives of occupants?
- Green Buildings on average: 30% more energy efficient, have 35% carbon savings, use 30-50% less water, produce 50-90% less waste that goes to landfills.

Green Building Rating Systems

- UGGBC: LEED, USA 1999.
- Green Star Building Council, Australia. 2002
- BREEAM, England.
- GBI, Green Globes, Canada.
- EEWH, Taiwan
- CASBEE, Japan
- ILFI, Living Building Challenge, USA

US Green Building Council (USGBC)

- The U.S. Green Building Council is committed to a sustainable, prosperous future through LEED, the leading program for green buildings and communities worldwide. Our vision is that buildings and communities will regenerate and sustain the health and vitality of all life within a generation. Our mission is to transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life.
- LEED = Leadership in Energy and Environmental Design
- LEED is non-governmental; totally voluntary enrollment.
- An investment in LEED equals a lifetime of returns. LEED certified buildings are safer, greener and save owners on maintenance costs over a building's life cycle. LEED works for all building types anywhere. Explore our LEED project directory.
- 2.4 million square feet certified LEED daily
- 94,000 + participating LEED projects (excludes LEED ND)
- 165 + countries & territories with LEED projects

LEED v4 for BD+C: New Construction and Major Renovation

Project Checklist

Project Name:
Date:

Y	?	N			
			Credit	Integrative Process	1

Y	?	N			
0	0	0	**Location and Transportation**		16
			Credit	LEED for Neighborhood Development Location	16
			Credit	Sensitive Land Protection	1
			Credit	High Priority Site	2
			Credit	Surrounding Density and Diverse Uses	5
			Credit	Access to Quality Transit	5
			Credit	Bicycle Facilities	1
			Credit	Reduced Parking Footprint	1
			Credit	Green Vehicles	1
0	0	0	**Sustainable Sites**		10
Y			Prereq	Construction Activity Pollution Prevention	Required
			Credit	Site Assessment	1
			Credit	Site Development - Protect or Restore Habitat	2
			Credit	Open Space	1
			Credit	Rainwater Management	3
			Credit	Heat Island Reduction	2
			Credit	Light Pollution Reduction	1
0	0	0	**Water Efficiency**		11
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
			Credit	Outdoor Water Use Reduction	2
			Credit	Indoor Water Use Reduction	6
			Credit	Cooling Tower Water Use	2
			Credit	Water Metering	1
0	0	0	**Energy and Atmosphere**		33
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
			Credit	Enhanced Commissioning	6
			Credit	Optimize Energy Performance	18
			Credit	Advanced Energy Metering	1
			Credit	Demand Response	2
			Credit	Renewable Energy Production	3
			Credit	Enhanced Refrigerant Management	1
			Credit	Green Power and Carbon Offsets	2

Y	?	N			
0	0	0	**Materials and Resources**		13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
			Credit	Building Life-Cycle Impact Reduction	5
			Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
			Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
			Credit	Building Product Disclosure and Optimization - Material Ingredients	2
			Credit	Construction and Demolition Waste Management	2
0	0	0	**Indoor Environmental Quality**		16
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
			Credit	Enhanced Indoor Air Quality Strategies	2
			Credit	Low-Emitting Materials	3
			Credit	Construction Indoor Air Quality Management Plan	1
			Credit	Indoor Air Quality Assessment	2
			Credit	Thermal Comfort	1
			Credit	Interior Lighting	2
			Credit	Daylight	3
			Credit	Quality Views	1
			Credit	Acoustic Performance	1
0	0	0	**Innovation**		6
			Credit	Innovation	5
			Credit	LEED Accredited Professional	1
0	0	0	**Regional Priority**		4
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1

0	0	0	**TOTALS**	Possible Points:	**110**

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

LEED Certified UM Buildings

- Payne Family Native American Center, LEED v2.2, Platinum. 2010, 30,000 SF
- Gilkey Center, LEED v 3. Gold. 2016. 30,000 SF
- Adams Center: Academic Athlete Center, LEED v3, Gold. 2017. 15,000 SF
- Missoula College, LEED v3, Gold. 2017. 105,000 SF
- Champions Center, LEED v3, Gold. 2017. 51,000 SF
- PJW College of Education, LEED v4, Gold. 2019. 35,000 SF