



2012

STARS Report: Benchmarking Our Progress on Sustainability

Ezra Small

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STARS Gold-rated Universities

- American University
- Emory University
- University of Colorado Boulder
- University of Denver
- Portland State University
- Arizona State University
- University of California San Diego

University of Massachusetts Amherst

- University of New Hampshire
- University of Northern Iowa
- University of South Florida
- Calif. State Univ. Monterey Bay
- University of Alaska Fairbanks

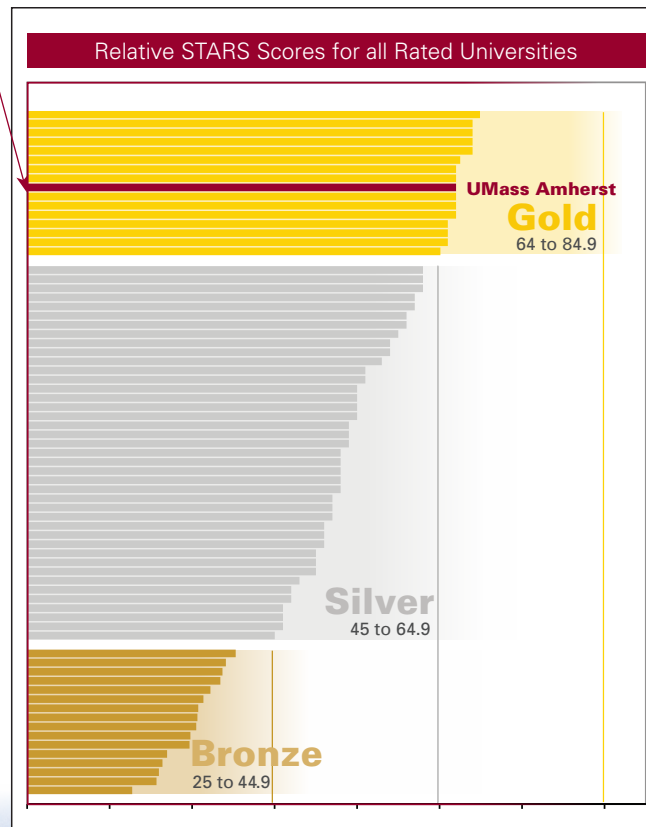
- Duke University
- New York University
- Oregon State University

STARS Silver-rated Universities

- University of Florida
- Tufts University
- Furman University
- Cleveland State University
- Virginia Tech
- Florida Gulf Coast University
- Northern Arizona University
- University of Minnesota, Twin Cities
- University of California, Los Angeles
- Pennsylvania State University
- State University of New York at Oswego
- University of Oregon
- Yale University
- George Mason University
- St. John's University
- Illinois Institute of Technology
- University of Colorado, Colorado Springs
- University of Houston
- Washington University in St. Louis
- University of North Carolina Chapel Hill
- Wake Forest University
- University of Arkansas
- Indiana University Bloomington
- Michigan State University
- University of Texas at Austin
- University of Nevada, Las Vegas
- Florida State University
- University of Louisville
- SUNY Environmental Sci. and Forestry
- Florida Gulf Coast University
- Cleveland State University
- University of Texas at Arlington
- Slippery Rock University

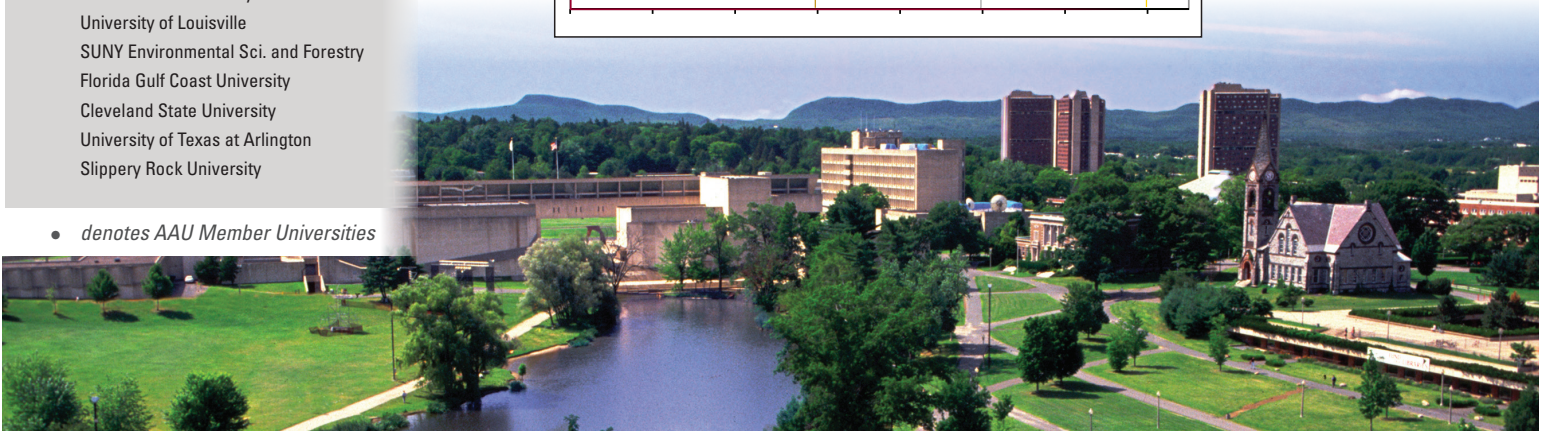
- denotes AAU Member Universities*

UMass Amherst is ranked in the top 10 research universities nationwide for its commitment to innovation and leadership in sustainability. The campus received a gold rating from the Association for the Advancement of Sustainability in Higher Education (AASHE)'s Sustainability Tracking Assessment Rating System (STARS). Only 16 U.S. universities have received this distinction as of January 2012. The STARS rating recognizes the multifaceted accomplishments and initiatives on campus, ranging from curriculum and education to energy use, food services, and campus planning. This executive summary of UMass Amherst's standing using the national standards set by AASHE demonstrates the breadth and scope of UMass strengths and indicates potential areas of growth.



STARS provides a useful framework for evaluating our progress on campus. It is a rigorous and far-ranging assessment of all sustainability-related campus initiatives and incorporates over 50 indicators.

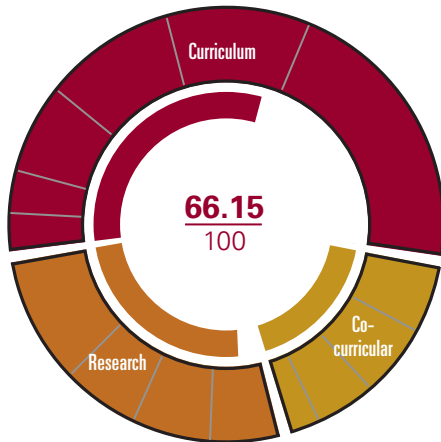
STARS
SUSTAINABILITY TRACKING
ASSESSMENT & RATING SYSTEM



The AASHE STARS system assesses campus sustainability in

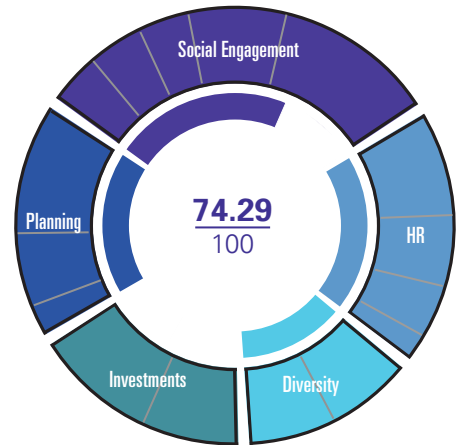
Education & Research

3 CATEGORIES



Social Engagement, Administration, & Finance

5 CATEGORIES



E&R

Points Earned by UMass
(color indicators)

Possible Points

0 3 6 9 12 15 18 21

Category	Indicator	Points Earned	Possible Points
CURRICULUM	Sustainability Courses	2.26	20
	Learning Outcomes	4.48	13
	Academic Programs	10	10
	#Depts. Offering Courses	3.51	7
	Curric. Dev. Incentives	3	3
	Sust. Literacy Assmt	0	2
	RESEARCH	Faculty Researchers	10
# Depts. Involved		6	6
Researcher Incentives		4.15	6
Tenure Considerations		5	5
CO-CURRICULAR	Outreach to Students	5	5
	Student Peer Educators	5	5
	Publications & Materials	4	4
	New Student Orient.	2	2 (7 of 8 mp)

SEA&F

Points Earned by UMass
(color indicators)

Possible Points

0 3 6 9 12

Category	Indicator	Points Earned	Possible Points
SOCIAL ENGAGEMENT	Comm. Service Hours	4.65	12 (0 of 1 mp)
	Cont. Ed. Courses	6.20	7
	Policy Advocacy	4	4
	Trademark Licensing	4	4
	Collab./Partnerships	4	4 (0 of 2 mp)
	PLANNING	Strategic Master Plans	10
Sust. Plan and Staff		6	6
Climate Action Plan		2	2
HR	Fair Compensation	8	8
	Sust. Educ. for Employee	5	5
	Orientation & Prof. Dev.	4	4
DIVERSITY	Employee Satisfaction	2	2 (3 of 3 mp)
	Support Programs	7	7
	Affordability, Diversity	6	6 (2 of 3 mp)
INVESTMENTS	Investments	0	9
	Shareholder Advoc./CSR	0	7 (0 of 3 mp)

E&R

(○ – mini pt. = 1/4 of a pt.)

14 Indicators
8 mini points

98
+ 2

100 Pts. possible

UMass Earned **66.15%**

SEA&F

(○ – mini pt. = 1/4 of a pt.)

16 Indicators
12 mini points

97
+ 3

100 Pts. possible

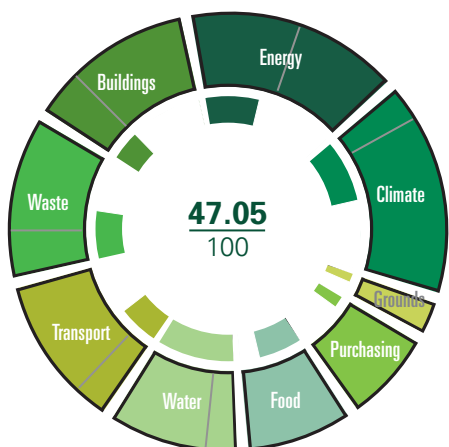
UMass Earned **74.29%**

Note: UMass earned 74.10 points, but the maximum possible was 99.75 because of one "opt-out" mini-point. $74.10/99.75 = 74.29\%$

three broad and equally weighted areas (100 points per area):

Facilities & Campus Operations

9 CATEGORIES



Each of these *three areas* is further **subdivided into major categories** (indicated in the doughnut and bar charts).

Within each of the *17 major categories*, the number of points earned is **determined by a set of weighted indicators** (see bar charts).

The scores for each of the **three areas** are **averaged**.

Finally, up to **4 BONUS points** may be earned for innovative practices and added to the averaged total for a **final STARS SCORE**.

4 BONUS POINTS FOR Innovation:

- ★ Green Building Guidelines
- ★ Franklin Dining Hall permaculture garden
- ★ Center for Agriculture's photovoltaic solar power arrays
- ★ Biochar initiatives

F&CO

Points Earned by UMass
(color indicators)

Possible Points

		0	3	6	9	12	15		
BUILDINGS	Emissions Reduction	4.47					14		
	GHG Inventory	2		(0 of 2 mp)			2		
ENERGY	Reducing Energy Use	1.55					8		(6 of 6 mp)
	Clean/Renew. Energy	1.26					7		
CLIMATE	Bldg. Op, Maint., AirQ	2.15					9		
	Bldg. Design & Constr.	1.50					4		
WASTE	Waste: Reduce/Divert	3.06					8		
	C&D, Hazard, Electric	2.71					3		(5 of 6 mp)
TRANSPORT	Commuter Modes	3					7		
	Vehicle Fleet	0.8		(9 of 12 mp)			2		
WATER	Water Consumption	7					7		
	Stormwater	2		(3 of 5 mp)			2		
FOOD	Local Foods	4.20					6		(8 of 10 mp)
PURCHASING	Purchasing	1.54					7		(1 of 2 mp)
GROUND	Grounds/IPM	0		(4 of 5 mp)			2		

F&CO 15 Indicators **88**
(○ – mini pt. = 1/4 of a pt.) + 48 mini points **+12**

100 Pts. possible

UMass Earned **47.05%**

Note: UMass earned 45.99 points, but the maximum possible was 97.75 because we were not required to count the IPM points (2) or one additional mini-point (0.25) in the total. 45.99/97.75=47.05%

HOW the Overall UMass Sustainability STARS Score was Computed

E&R 66.15

SEA&F + 74.29

F&CO + 47.05

(divide by 3) **187.49 / 300 pts**

= 62.49 / 100 pts

★★★★ + 4 BONUS pts

Final STARS Score

66.49

GOLD Rating = 65 to 84.9



ACADEMIC PROGRAMS

- Growing number of departments now offer courses in sustainability (25 of 60).
- Created three new graduate programs: MS in Sustainability Science (2011); MS in Environmental Conservation with Green Building Concentration (2009), and the forthcoming MS in Design and Historic Conservation (2012).
- Six undergraduate degrees currently include core requirements in sustainability, and we have a forthcoming Five College Undergraduate Certificate in Sustainability (Fall 2012).
- Increased opportunities for service learning and civic engagement through an additional General Education credit (2010), a new Civic Engagement track in the Bachelor's Degree with Individual Concentration (BDIC) program (2010), and the new Certificate in Civic Engagement and Service-Learning (2011).
- Fifteen additional undergraduate majors include sustainability coursework as part of their requirements.

STUDENT INITIATIVES

- Founded the Eco-Rep Program, a group of students trained in organizing educational activities in the residence halls around reducing personal and campus energy and resource use through sustainable behavior (2009).
- Originated a range of projects through the Sustainability Internship Program, including the campus Bike Share Program, Sustainable Move Out, energy competitions in the residence halls, composting and recycling at sporting events, and programming for Earth Day and Campus Sustainability Week.
- Assembled the Sustainability Steering Committee, populated by the SGA Secretary of Sustainability, senior members of the Sustainability Initiative Intern program, Green Building researchers, UMass Permaculture leadership and the Eco-Rep Program Manager.
- Established a new farmer's market, a collaboration between three student groups: the Student Farming Enterprise, Garden Share, and UMass Permaculture Initiative (2011).

ADMINISTRATION, SOCIAL ENGAGEMENT AND FINANCE

- Sustained commitment to ongoing implementation of sustainability best practices in education, facilities, and campus operations (Chancellor's Environmental Performance Advisory Committee, established 2007).
- Sustainability is embedded in our current campus master planning effort (2010-12).
- Campus recognized as a "Community Engaged University" by the Carnegie Foundation (2009), and featured by *USA Today* as one of the 20 colleges in the country most committed to community service (2011).
- New investment in staff hires in sustainability in the Physical Plant, Auxiliary Services and University Relations.
- Continued commitment to diversity includes the Chancellor's Diversity Advisory Committee (2010), a campus Diversity Plan (2011), and an information resource, the Diversity Matters Website (2011).

CENTRAL HEATING PLANT

- Completed in March 2008 as a \$133 million investment.
- Oil and natural gas co-generation produce both our electricity and steam heat.
- Provides heat and power to 30,000 people and 250 major buildings (16 million watts of electricity).
- Reduced our campus carbon footprint by a further 13% since it went on line; we no longer burn coal, and the total cumulative reduction in carbon emissions since 2004 now exceeds 30%.
- One of the most efficient combined heat and power plants in the country today.

UMASS DINING

- Purchases 27% of produce from local farmers and 10% of food from New England.
- Committed to increasing local food purchasing by 2% each year.
- First organization in Massachusetts to qualify for (OS1) Green Certification program.
- Trayless dining cuts food waste by 35% and reduces cleaning resources.
- Recycles and composts 72% of all Dining Commons waste; total campus recycling rate is 56%.
- Eliminates 600,000 disposable bottles and cans annually by distributing reusable water bottles to students and installing water purifying stations.
- Serves sustainable seafood in accordance with the Seafood WATCH guidelines.

GREEN BUILDING

- Developed rigorous campus standards for new construction and renovation using U.S. Green Building Council's LEED (Leadership in Energy & Environmental Design) guidelines (2011).
- Completed first three LEED-certifiable buildings.
- Created the Green Building Map, an interactive geographic display of all sustainable projects on campus (2011).
- Launched a new lecture series, "Designing for sustainability in the Built Environment," and regularly invite experts from a wide range of professions to campus.

PERMACULTURE GARDENS

- One of the first public universities in the nation to invest in creating permaculture gardens.
- Students transformed a conventional ¼ acre grass landscape near Franklin Dining Commons into a highly productive and low-maintenance garden without using fossil fuels.
- The Franklin Permaculture Garden now has more than 1,000 edible plants, which are used by the Dining Commons to feed students.
- A second garden is currently under construction near Berkshire Dining Commons.

The entire **UMass Amherst STARS** report can be found at:

<https://stars.aashe.org/institutions/university-of-massachusetts-amherst-ma/report/2011-07-29/>