

Carnegie Foundation Rankings

The Carnegie Foundation (<http://www.carnegiefoundation.org/>) classifies doctoral-granting institutions as either doctoral-research university (DRU), Research High-Activity (R/H) or Research Very High-Activity (RV/H). UM-Missoula is an R/H while MSU-Bozeman is RV/H. The foundation uses 7 fundamental measures of research activity: Science and Engineering (S&E) R&D Research Expenditures, non-S&E R&D Expenditures, Number of S&E staff (post-docs and non-faculty with doctorates), and number of doctorates granted yearly in the Humanities, Social Sciences, STEM and Other. In addition, 3 of those measures (S&E Expenditures, Non-S&E Expenditures and S&E staff) were computed on a per-capita basis (relative to number of full-time faculty) to provide an additional three metrics. Principal component analysis is performed on the 7 original variables and also on the 3 per-capita measures to provide the Aggregated Research Activity Index and a Per-capita Research Activity Index for every research institution in the country. Universities that are very high on either index (or both) are RV/H.

	S&E R&D Expend	Non-S&E R&D Exp	S&E staff	Humanit Docs	SocSci Docs	STEM Docs	Other Docs	Per-capita S&E Exp	Per-capita Non S&E Exp	Per-capita S&E staff
RV/H (median)	255,916	24,527	336	35	34	134	174	166.2	17.6	0.231
R/H (median)	36,134	5,978	31	4	10	30	29	52.9	8.1	0.042
UM	58,735	578	40	1	7	24	11	102.7	1.0	0.070
	TOTAL	FEDERAL						TOT per	FED per	
UM - 572	64,405	38,565		1	7	24	11	112.6	67.4	
MSU - 580	128,429	87,528		0	1	48	6	221.4	150.9	
Brandeis -361	78,580	48,235		15	25	40	8	217.7	133.6	
UCF - 1318	111,695	69,098		4	36	129	30	84.7	52.4	
U Ark - 1035	124,378	37,587		7	21	99	23	120.2	36.3	
GA St - 1142	94,499	28,210		22	47	41	72	82.7	24.7	

Note: Expenditure data is in \$1000s.

Top American Research Universities

The Center for Measuring University Performance (mup.asu.edu) has defined 10 measures of university research performance: Total Research Expenditures, Federal Research Expenditures, Endowment Assets, Annual Giving, National Academy Members, Faculty Awards in the Arts, Humanities, Science, Engineering, and Health, Doctorates Awarded, Post-doctoral Appointees, SAT Scores and Number of National Merit and Achievement Scholars. The most recent rankings (2011) uses NSF Expenditure Data from 2009. UM-Missoula is in Group 6 (schools 126-150) with a ranking of 139 with \$36.631M in Federal Research Expenditures. Note that our recently completed 2012 NSF Expenditure data shows \$35.984M. In order to be ranked in the overall rankings the university must expend at least \$40M in Federal Research Expenditures (top 100 cutoff is approximately \$74M, MSU-Bozeman is currently at #102).

Recommendation: Set as a goal to become a Carnegie RV/H Institution.

1. Grow funded research

- a. “Structural” changes - correctly book institutional expenditures, account for research funding through UMF [Research and Technology Foundation], correctly identify Federal expenditures, increase F&A rate, adequately fund ORCS
- b. “Institutional” changes – proposal development office, research and creative scholarship central to P&T [departmental metrics], VPRCS part of P&T process, VPRCS involved in allocation of faculty lines, RC, CRED, entrepreneurship [Blackstone + EDA UC], identify UM as the driver of ED.
- c. Increase state-funded research – UM is low compared to many research institutions, connect Research to Economic Development and other state interests [rural healthcare, fire, natural resources,...], make research a priority at Regents [EPSCoR cost share, line-items for centers/institutes], make research/economic development a priority with legislature [MonTEC, Innovation Campus], better working relations with all state agencies [DNRC, MDOT].
- d. Increase federally-funded research –work with Deans/Chairs to identify programs for improvement, gain budgetary control of state-wide awards (EPSCoR, INBRE), expand into heavily funded areas (that also make sense student-wise), i.e. biomedical engineering, cyber, big data, informatics, others?, Broaden participation, improve federal initiative process, translational research [clinical, St. Pats institutes, etc.]

2. Express growth and excitement in creative scholarship

- a. Some improvements already, i.e. new UM web page (need to keep “research” landing page dynamic, Glimpse (need to get email-sender to allow images and attractive content), II2013, Eureka, Facebook, Twitter
- b. Make sure research and creative scholarship are part of the UM “message”
- c. How do we express it? Performances, Publications, etc. [faculty awards]
- d. “Awards and Honors” day in the fall?

3. Connections to the graduate school

- a. Message to BoR/legislature = Research & Creative Scholarship->Economic Development->Graduate Programs
- b. Tie campus metrics to doctoral/post-doctoral associates
- c. With sufficient funding there are programs to help graduate students, i.e. 3:1, DIG/TIG
- d. II2013/2014

4. Research compliance – Compliant, working on Export Control (CITI) and Data Management (library/CIO)

5. Expand impact of Research Day

- a. Earlier start, greater visibility