

Using Data to Promote Awareness of and Participation in Undergraduate Research & Creative Works

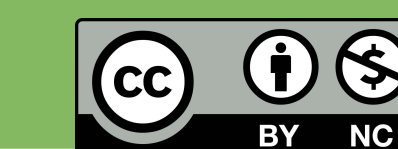
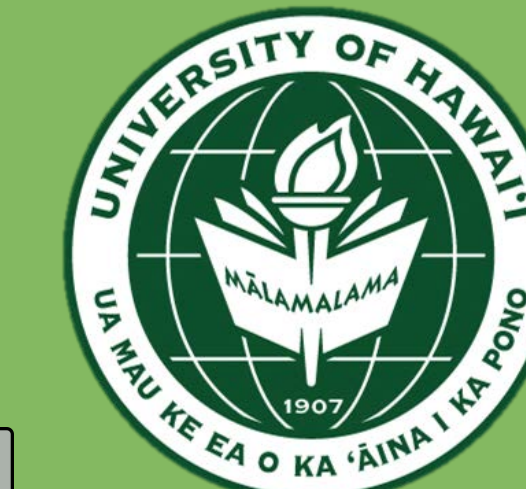


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Program Facts

In line with UH Mānoa's distinction as an R1 University, UROP coordinates and promotes opportunities for **all undergraduate students across all disciplines** at UH Mānoa to engage in faculty-mentored research and creative works

- UROP funded ~\$2.5 million to ~1,000 students in 78 disciplines since 2011

Introduction




Data analysis of UROP-funded students from AY11-18 identified underrepresentation* in individual units, showing potential gaps in awareness of funding opportunities


*students in that unit (department/college/school) received a disproportionately low percentage of funding based on student enrollment

Objective

Use historical data to **identify underrepresented units** to promote undergraduate research and creative work opportunities to **all undergraduate students in all disciplines**

Methods

Identify: underrepresented units (< 0.49) 
 proportionately represented units (= 1 ± 0.50) 
 well-represented units (> 1.51) 

Identify: underrepresented units UROP needs to engage 

Identify: units actively engaging UROP for collaboration 

Promote UROP in  and  by implementing the following information campaign activities:

Prior Activities in AY11-18	New Activities Implemented in AY19 in Addition to Prior Activities in AY 11-18
- Host ~5 Information Sessions per semester	- Proactively request faculty/staff to invite UROP to provide Information Session to students in class and to faculty and staff in meetings
- In-class Information Session by request from faculty	- Provide targeted message to faculty/staff/students based on discipline and graduation requirement
	- Collaborate with unit events, including advising sessions, orientations, CTE sessions, etc.
	- Promote UROP via campus-wide distribution of advertising flyers, cards, and newsletter

Data Analysis

A	B	C	D	E	F	G	H	I	J	K	L	M
College/School	Funded AY11-18	% Funded AY11-18	Total Enroll AY12-18	% Enroll	% Funded AY11-18/Total Enroll AY12-18	% Funded AY19/Total Enroll AY12-18	% Funded AY11-19/Total Enroll AY12-18	Diff	Funded AY19	Funded Total AY11-19	% Funded AY19	% Funded Total AY11-19
Trop Ag & Human Res	84	10.4	5406	6.6	1.6	1.9	1.6	0.1	18	102	12.7	10.7
Arts and Humanities	62	7.7	6437	7.8	1.0	0.6	0.9	-0.1	7	69	4.9	7.3
Business Admin.	4	0.5	7970	9.7	0.1	0.0	0.0	0.0		4	0.0	0.4
Education	10	1.2	7702	9.4	0.1	0.0	0.1	0.0		10	0.0	1.1
Engineering	147	18.2	9003	11.0	1.7	4.4	2.1	0.4	68	215	47.9	22.6
Languages, Linguistics and	16	2.0	4495	5.5	0.4	0.4	0.4	0.0	3	19	2.1	2.0
Natural Sciences	315	38.9	14776	18.0	2.2	1.2	2.0	-0.1	30	345	21.1	36.3
Astronomy		0.0	32	0.0	0.0	18.1	2.7	2.7	1	1	0.7	0.1
Astrophysics	3	0.4	118	0.1	2.6	14.7	4.4	1.8	3	6	2.1	0.6
Physics	10	1.2	398	0.5	2.6	1.5	2.4	-0.2	1	11	0.7	1.2
Social Sciences	80	9.9	13107	16.0	0.6	0.2	0.6	-0.1	4	84	2.8	8.8
Interdisciplinary Studies	11	1.4	669	0.8	1.7	0.9	1.5	-0.1	1	12	0.7	1.3
Ocean & Earth Sci & Tech	44	5.4	874	1.1	5.1	4.0	4.9	-0.2	6	50	4.2	5.3
Pacific & Asian Studies	2	0.2	442	0.5	0.5	1.3	0.6	0.1	1	3	0.7	0.3
Asian Studies	1	0.1	332	0.4	0.3	1.7	0.5	0.2	1	2	0.7	0.2
Nursing & Dental Hygiene	10	1.2	4620	5.6	0.2	0.3	0.2	0.0	2	12	1.4	1.3
Architecture	1	0.1	1257	1.5	0.1	0.9	0.2	0.1	2	3	1.4	0.3
Hawaiian Knowledge	6	0.7	1099	1.3	0.6	0.0	0.5	-0.1		6	0.0	0.6
Medicine	4	0.5	185	0.2	2.2	0.0	1.9	-0.3		4	0.0	0.4
Social Work	7	0.9	1638	2.0	0.4	0.0	0.4	-0.1		7	0.0	0.7
Travel Industry Mgmt	6.0	0.7	2459	3.0	0.2	0.0	0.2	0.0		6.0	0.0	0.6
Funded Total AY11-19	809	100.0	82139	100.0					142	951	100.0	100.0



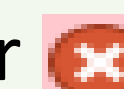
Results: # of Funded Students (Total & Per Semester)

	Total	Total	Per Semester	Per Semester
AY11-18	626	183	48.2	14.1
AY19	60	82	30	41
% Change			-37.7%	191.3%
AY11-18 (minus Engineering)	784	25	60.3	1.9
AY19 (minus Engineering)	132	10	66	5
% Change			9.4%	160.0%

Conclusion

- Using historical data to identify underrepresented units to promote undergraduate research and creative work opportunities to all undergraduate students in all disciplines can have immediate impacts
- Continue existing collaborations to keep up the awareness
- Promote **directly** to faculty/staff/students with **targeted message**
- Promoting undergraduate research and creative work opportunities is a long-term project; students are rarely ready to submit a proposal within months after an Information Session.

Next Steps

- Continue working with  and 
- Establish ties with other , including the College of Education, School of Social Work, School of Travel Industry Management, and College of Language, Linguistics, and Literature
- Establish additional metrics/data, including the overall number of students participating in UROP funded opportunities, survey to measure the effectiveness of the information campaign, and survey to measure student, faculty, and university outcomes