

College of Science and Mathematics

2022-2025 Research Strategic Plan

Tarleton State University and the College of Science and Mathematics (COSM) are in state of transition as it relates to the research expectations of tenured and tenure track faculty. With its recent achievement of the Carnegie R2 classification (Spring 2022) and the move towards having faculty with a 3/3 teaching load, there is a clear path set for faculty with enhanced research expectations. As we navigate through this transition period where most new hires are likely to begin with a 3/3 teaching load and some existing faculty will transition to 3/3 teaching loads, COSM-level research productivity will naturally increase.

However, there will continue to be many faculty in COSM with a 4/4 teaching load operating with a different and lower level of research expectations. College level goals and action planning MUST be respectful of all COSM faculty based on their respective teaching loads.

The outlined goals represent our aspirations for this transition period that should only be used in the aggregate at the college-level and not used to impose specific research goals on individual faculty. Individual faculty research goals should be based on the college scholarly and creative expectations for tenure and promotion.

Four college-level metrics have been identified for tracking the success of our research agenda:

1. number of peer-reviewed faculty/student publications
2. number and/or percentage of students participating in research
3. number and dollar amount of external grants (funded, submitted, annual change)
4. number of presentations/posters at local, regional, national, and international conferences

Due to the inherent fluctuations in these metrics, a rolling three-year average will be used to establish goals and track success.

Metric 1: Publications

Goal: Increase by 10% per year the total number of publications until the College average of one publication per year per tenure-track faculty member is reached.

Metric 2: Student Participation in Research

Goal 1: Increase the number of undergraduate students participating in research by 7% per year

Goal 2: At least 80% of the tenure-track faculty are engaged with students in research.

Metric 3: Number and Dollar Amount of External Grants

Goal 1: Increase the number of annual external grant submittals by 10% per year.

Goal 2: Increase the number of new external grants funded by 7% per year.

Goal 3: Increase the three-year average of new external grant award dollars by 7% per year.

Goal 4: Increase by 10% per year the number tenure-track faculty submitting an external grant or have an active external grant award as PI or co-PI until 50% of tenure-track faculty submit or have an active external grant as PI or co-PI.

Metric 4: Faculty and Student Conference Presentations

Goal: Increase the number of faculty and student conference presentations by 7% per year.

Definitions:

1. Tenure-track faculty includes tenured faculty and untenured assistant professors.
2. Publications include all publications reported in Digital Measures (journal articles, technical reports, patents, books, book chapters, etc.).
3. Conference presentations can be at a local, regional, national, or international meeting or conference. Presentations in a classroom setting don't meet this goal. Multiple presentations of the same research with a change of venue can be counted multiple times.

Publications*						3-yr avg	Projections		
	2017	2018	2019	2020	2021		2022	2023	2024
Biology	16	12	14	13		13			
CHGP	4	6	1	4		4			
Mathematics	5	12	12	9	1	11			
Sci & Math - Total	25	30	27	26	1	28	30	32	34

Grants & Contracts**							3-yr average	Projections		
		2017	2018	2019	2020	2021		2022	2023	2024
Biology	Submitted	5	5	10	8	5	8			
	Awarded	2	1	3	2	0	2			
	\$\$ Pursued	\$227,063	\$3,037,903	\$2,135,506	\$1,562,008	\$972,714	\$2,245,139			
	\$\$ Awarded	\$32,936	\$100,001	\$94,345	\$192,951	\$0	\$129,099			
CHGP	Submitted	2	2	2	10	4	5			
	Awarded	2	0	1	2	1	1			
	\$\$ Pursued	\$45,363	\$433,712	\$67,520	\$2,353,595	\$1,217,992	\$951,609			
	\$\$ Awarded	\$45,363	\$0	\$39,520	\$229,800	\$28,000	\$89,773			
Mathematics	Submitted	0	3	1	2	0	2			
	Awarded	0	0	1	0	0	0			
	\$\$ Pursued	\$0	\$1,399,592	\$2,000	\$1,315,165	\$0	\$905,586			
	\$\$ Awarded	\$0	\$0	\$2,000	\$0	\$0	\$667			
Sci & Math - Total	Submitted	7	10	13	20	9	14	15	16	18
	Awarded	4	1	5	4	1	3	4	4	4
	\$\$ Pursued	\$272,426	\$4,871,207	\$2,205,026	\$5,230,768	\$2,190,706	\$4,102,334			
	\$\$ Awarded	\$78,299	\$100,001	\$135,865	\$422,751	\$28,000	\$219,539	\$234,907	\$251,350	\$268,945

Faculty Research w/ Students				
		2019-20	2020-21	2021-22
Bio	Faculty Research w/ students	10	10	10
	# of Faculty	11	11	12
	Percent	91%	91%	83%
CHGP	Faculty Research w/ students	11	9	9
	# of Faculty	11	11	11
	Percent	100%	82%	82%
Math	Faculty Research w/ students	10	4	7
	# of Faculty	13	13	13
	Percent	77%	31%	54%
COSM	Faculty Research w/ students	31	23	26
	# of Faculty	35	35	36
	Percent	89%	66%	72%

Conference Presentations*						3-yr avg	Projections		
	2017	2018	2019	2020	2021		2022	2023	2024
Biology	32	52	76	15	55	48			
CHGP	28	19	15	8	12	14			
Mathematics	38	60	55	71	36	62			
Sci & Math - Total	98	131	146	94	103	124	130	136	143

Students Involved in Research					3-yr avg	Projections		
		2019-20	2020-21	2021-22		2022-23	2023-24	2024-25
Biology	Undergraduate	57	52	50	53			
	Graduate	24	22	13	20			
CHGP	Undergraduate	36	33	20	30			
	Graduate	12	15	12	13			
Mathematics	Undergraduate	29	13	18	20			
	Graduate	10	14	12	12			
Sci & Math - Total	Undergraduate	122	98	88	103	110	118	126
	Graduate	46	51	37	45	48	51	55