

SA * * * * S 1900	FUNDING AGENCY	FUNDING AMOUNT	PRIMARY AREA(S) OF EMPHASIS								TARGET INSTI	rutions		MECHANISMS FOR IMPLEMENTATION					
ORGANIZATION AND INITIATIVE			Pedagogy	Course Content/ Curriculum	Broader Institutional Policies & Practices	Workforce Development	Faculty Development	Graduate Student Training/ Future Faculty Development	Retention of Women, URM, & Diverse Populations	K–12 Teacher Preparation	Research Universities (RU/VH, RU/H, DRU)	Comprehensive and Liberal Arts Colleges (Masters/I)	Minority Serving Institutions (HBCU, HSI, TCU, Etc.)	Community Colleges (Assoc/Pu, Assoc/Priv)	Incentive	Demonstration Projects	Workshops, Forums, Conferences, and Institutes	Framework	Course Redesign Researc Study
Association of American Universities (AAU): Undergraduate STEM Education Initiative	Leona M. and Harry B. Helmsley Charitable Trust/ NSF WIDER	\$4.7M/\$294k	3				3				3				3	3		3	
Association of Public Land-grant Universities (APLU)/American Association of Community Colleges (AACC)/Open Learning Initiative (OLI): Cognitive Coursewares Design	Bill & Melinda Gates Foundation	≈\$398k	3	3							3			3		3	3		3
Association of Public Land–grant Universities (APLU): Math Teacher Education Partnership (MTEP)	National Science Foundation/ Carnegie Corporation of New York	≈\$199k/ \$13,500	3							3	3		3						3
Association of Public Land–grant Universities (APLU): Minority Male STEM Initiative	Alfl P. Sloan Foundation (Phase I)/ Kresge Foundation (Phase II)	\$180k/\$600k			3				3		3		3	3			3		3
Association of Public Land-grant Universities (APLU): Science and Mathematics Teacher Imperative (SMITI)	National Science Foundation	≈\$1.79M	3		3					3	3		3				3	3	3
Bay View Alliance (BVA)	Sloan Foundation	\$804K	3		3						3					3	3		3
Business Higher Education Forum (BHEF): STEM Higher Education Workforce Projects	Alfl P. Sloan Foundation/ONR/ Northrup Grumman/ Science Applications International Corporation (SAIC)/ Washington University (St. Louis)	\$400k/\$150K /150k/100k/ 100k				3			3		3					3			3
Center for the Integration of Research, Teaching, and Learning (CIRTL)	National Science Foundation	≈\$5.7M						3			3						3	3	3
Cottrell Scholar Collaborative New Faculty Workshop	American Chemical Society/ Research Corporation for Science Advancement	\$25,000		3		3	3				3						3		
Howard Hughes Medical Institute (HHMI)/NSF/NIH: Partnership for Undergraduate Life Sciences (PULSE)	NSF, NIH/NIGMS, HHMI	unknown		3			3				3	3	3		3		3		
Howard Hughes Medical Institute (HHMI): Society of HHMI Professors	Internal	Internal	3				3				3						3		
National Academies (NAS)/HHMI: Summer Institute on Undergraduate Education	HHMI/ President's Council of the National Research Council/ Yale University	>4M (since 2004)/ unknown/ unknown	3				3				3	3	3				3		
Project Kaleidoscope (PKAL): Ramping UP for STEM Success: Pathways for STEM Student Transfer	Bill and Melinda Gates Foundation	unknown			3						3	3	3	3			3		
Project Kaleidoscope (PKAL): Regional Networks	Fee-based program	n/a	3	3			3	3	3		3	3	3	3					
Project Kaleidoscope (PKAL): STEM Education Effectiveness Framework Project	W.M. Keck Foundation	\$250K			3						3	3	3			3	3	3	
Project Kaleidoscope (PKAL): Leadership for 21st Century STEM: Summer Leadership Institute (SLI)	Fee-based program	n/a					3				3	3	3	3			3		
Project Kaleidoscope (PKAL): Sustainability Improves Student Learning (SISL) in STEM	US Department of Education	\$869,937 (over 3 years)	3	3	3		3		3		3	3	3	3			3		3
Reinvention Center	National Science Foundation	\$48,500 (2010 & 2012 Bi-Annual Conference)	3	3	3	3	3	3	3		3				3	3	3		3
Vision and Change	National Science Foundation	\$842,313	3	3							3						3		

MATRIX OF NATIONAL STEM UNDERGRADUATE EDUCATION INITIATIVES



1900		PRIMARY AREA(S) OF EMPHASIS								TARGET INSTITUTIONS				MECHANISMS FOR IMPLEMENTATION						
Organization and Initiative	Funding Agency	Funding Amount	Pedagogy	Course Content/ Curriculum	Broader Institutional Policies & Practices	Workforce Development	Faculty Development	Graduate Student Training/ Future Faculty Development	Retention of Women, URM, & Diverse Populations	K-12 Teacher Preparation	Research Universities (RU/VH, RU/H, DRU)	Comprehensive and Liberal Arts Colleges (Masters/I)	Minority Serving Institutions (HBCU, HSI, TCU, Etc.)	Community Colleges (Assoc/Pu, Assoc/Priv)	Incentive	Demonstration Projects	Workshops, Forums, Conferences, and Institutes	Framework	Course Redesign	Research Study
University of Texas-Austin/U-Teach Institute/ National Math & Science Initiative (NMSI): U-Teach Program	Exxon Mobil Corporation/ Bill & Melinda Gates Foundation/ Michael & Susan Dell Foundation	\$125M/\$3.75M ≈\$10.1M (2012 from Bill&Melinda)								3	3				3		3			
American Physical Society: Support Programs for Undergraduate Instruction	Internal	Internal	3	3			3				3	3	3				3		3	
American Association of Community Colleges (AACC)/ National Science Foundation (NSF): Advanced Technical Education Program	NSF	N/A				3	3							3			3			
National Center for Academic Transformation (NCAT)	Pew Charitable Trusts	\$8.8M (1999–2004)	3	3							3	3	3				3		3	
American Chemical Society (ACS): Chemistry in the Context Workshop Series for Undergraduate Education	Internal	\$15-20k per workshop	3	3			3	3	3	3	3	3	3	3			3			
American Society for Engineering Education (ASEE): Student Retention Best Practices/Strategies Synthesis	Parsons Brinkerhoff	\$50,000/year (5 years)			3						3	3	3	3						3
American Society for Engineering Education (ASEE): Sloan Study – National Benchmark Survey of Engineering Student Retention	unknown	unknown			3						3	3	3							3
American Society for Engineering Education (ASEE): National Effective Teaching Institute (NETI) and Engineering Deans Institute (EDI)	unknown	unknown	3				3				3	3	3	3			3			
American Society for Microbiology (ASM): Curriculum Guidelines for Undergraduate Microbiology	Internal	\$100k		3			3				3	3	3						3	
Council of Scientific Society Presidents (CSSP): The Role of Scientific Society Presidents in STEM Faculty Workshops	National Science Foundation	\$41,599					3				3	3	3		3		3		3	
American Association of Physics Teachers, American Physical Society, American Astronomical Society Physics & Astronomy New Faculty Workshops	National Science Foundation	\$880,000	3				3				3	3	3				3	3		3
American Association of Physics Teachers, American Physical Society, American Astronomical Society Experienced Faculty Workshops	National Science Foundation	\$88,000	3				3				3	3	3			3	3	3		
American Association of Physics Teachers Two-Year College New Faculty Experience	National Science Foundation	\$560,000	3				3							3			3	3		
American Association of Physics Teachers Strategic Programs for Innovations in Undergraduate Physics	Exxon Mobil Foundation/ National Science Foundation	~\$385,000		3	3						3	3	3				3	3		

This matrix is not intended to be an exhaustive list of national STEM Initiatives, instead it highlights a select number of efforts.

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