

Annotated List of Summer Research Programs and Internships 2025

Many REU programs are for students in their junior year who have created at least one proof-intensive course or upper division course in algebra, analysis, or linear algebra. The annotated list emphasizes opportunities which do not have these requisites.

The full annotated list is hosted on a [google spreadsheet](https://docs.google.com/spreadsheets/d/1Nh6D2sKShpcLHgTDn0Ua-opP3g7KHxctsuvWxkh738w/edit?usp=sharing). If you download a copy, you can sort according to any of the columns. <https://docs.google.com/spreadsheets/d/1Nh6D2sKShpcLHgTDn0Ua-opP3g7KHxctsuvWxkh738w/edit?usp=sharing>

The spreadsheet and annotated list were compiled in early January. Some opportunities may update later, and we encourage you to check websites for the most recent information. Additionally, many REU sites do not list minimum prerequisites, or we may have missed some. Please look carefully at the full list of REU websites and contact program organizers with any questions.

On the following pages are specific REUs with unique prerequisites:

- fewer math requirements (below linear algebra or calculus 3)
- welcome younger students (sophomore year or lower)
- without citizenship requirements
- welcome graduating or graduated students
- with different emphases

We also have a page of links to other sources of research opportunities (e.g. in different majors or not affiliated with NSF REU sites).

Mathematics students with a background in programming or courses in another science (e.g. biology or chemistry) can be competitive for programs in these areas. We encourage students to apply broadly to interesting opportunities.

The final page of this document is a history of the annotated list.

With fewer math requirements (programs requiring beyond calculus are not listed)

Req	Institution	Topic	Website	Additional Notes
none	Northwestern	Quantitative Biology	https://sites.northwestern.edu/quantitativebiologyreu/	Math requirements not explicit, but explicitly allow freshmen
none	North Carolina State University	Algorithm Design - Theory and Engineering	https://sites.google.com/ncsu.edu/algorithm-design-theory-and-en/home?authuser=0	Math requirements not listed, but explicitly allow high school
none	North Carolina State University	Math & Stats	https://math.sciences.ncsu.edu/undergraduate/reu-at-nc-state	early math studies are okay
college algebra	Prairie View A&M University	Mathematical Modeling	https://www.pyamu.edu/bcas/reu/	Not updated, but ran in 2024
college math	Georgetown University	Statistics or Research/Learning	https://www.spatialreu.org/	Not updated, but on NSF website
calc + stats	Rice University	Statistics and Data Science	https://statistics.rice.edu/academics/undergraduate/research-experiences-undergraduates	NOT RUNNING IN 2025, but may return 2026
Calc 2	Arizona State University	Quantitative Research in the Life and Social Sciences	https://qrissp.asu.edu/	1 year of calculus
Calc 2	Clarkson University	Mathematical Biology	https://www.clarkson.edu/mbiots-research-experience-undergraduates-reu	
Calc 2	Institute for Mathematical and Statistical Innovation	Bootcamp	https://www.imsi.institute/activities/sumsa-2025/	1 year of calculus, no higher level math preparation
Calc 2	University of Central Florida	applied and computational math	https://sciences.ucf.edu/math/reu-in-applied-computational-mathematics/	
Calc 2	Youngstown State University	multiple projects	https://ysu.edu/ysu-bump	Not updated, but ran in 2024
Calc ?	Texas A&M University	Mathematical Sciences and their Applications	https://www.math.tamu.edu/undergraduate/research/REU/	only specifies calculus and elementary linear algebra
???	Mathematical Staircase, Inc.	combinatorial representation theory	http://www.mathily.org/mathilyest/	"deeply but informally prepared"

For students in early academic years (programs for juniors or higher are not listed)

Req	Institution	Topic	Website	Additional Notes
HS	North Carolina State	Algorithm Design	https://sites.google.com/ncsu.edu/algorithm-design-theory-and-en/home?authuser=0	
HS	UNC Charlotte	multiple projects	https://pages.charlotte.edu/mathresearch/	College-bound high school
HS	University of Virginia	Number Theory, Representation Theory and Topology	https://uva.theopenscholar.com/reu/program	high school students who are adequately prepared
CC	Texas A&M Kingsville	Comp Sci, Convex Geometry	(no website)	Not updated, but on NSF website
1st	Department of Energy		https://science.osti.gov/wdts/suli	
1st	Mathematical Staircase, Inc.	combinatorial representation	http://www.mathily.org/mathilyest/	
1st	Rice University	Statistics and Data Science	https://statistics.rice.edu/academics/undergraduate/research-experiences-undergraduates	NOT RUNNING IN 2025, but may return 2026
1st-2nd	Michigan State University	Discrete and Applied	http://lbc.msu.edu/about/suriem.html	1-2 year math encouraged
1st-2nd	Prairie View A&M University	Mathematical Modeling	https://www.pvamu.edu/bcas/reu/	Not updated, but ran in 2024
1st-2nd	Virginia Commonwealth	multiple projects	https://math.vcu.edu/reu/#eligibility	encourage fresh/soph
1st-2nd	Youngstown State	multiple projects	https://ysu.edu/ysu-bump	Not updated, but ran in 2024
2nd	Arizona State University	Life and Social Sciences	https://qrlssp.asu.edu/	
2nd	DIMACS	discrete math / CS	https://reu.dimacs.rutgers.edu/	"exceptional" sophomores
	Fairmont State University	Analysis	https://www.fairmontstate.edu/scitech/students/math-research-experience-undergraduates.aspx	sophomore level math
2nd	Florida Tech	Statistics, Geoscience	https://research.fit.edu/smag-reu/	finishing sophomores preferred
2nd	Georgetown University	Statistics or Research/Learning	https://www.spatialreu.org/	
2nd	MSRI	quantitative justice	https://www.slmath.org/msri-up	two years of college math
	PROMYS	current high school students	https://promys.org/home	

For Non-US Citizens or Residents (seem to provide the same level of funding)

Institution	Topic	Website
Cold Spring Harbor Laboratory	Biology	https://www.cshl.edu/education/undergraduate-research-program/
CUNY Baruch College	Discrete Mathematics	https://geometrynyc.wixsite.com/home/combinatorics-reu
Institute for Computational and Experimental Research in Mathematics	Interdisciplinary	https://icerm.brown.edu/summerug/
Institute for Mathematical and Statistical Innovation	Bootcamp	https://www.imsi.institute/activities/sumsa-2025/
Institute of Science and Technology Austria	Mathematics	https://phd.pages.ist.ac.at/isternship/
Iowa State University	multiple projects	https://www.mathreu.org/
Mathematical Sciences Research Institute	quantitative justice	Note: only DACA (not international) https://www.slmath.org/msri-up
Polymath REU	multiple projects	https://geometrynyc.wixsite.com/polymathreu
Salk	biomedical	https://www.salk.edu/about/our-community/summer-research-opportunities/
University of California at Los Angeles	Industrial Projects	https://www.ipam.ucla.edu/programs/student-research-programs/research-in-industrial-projects-for-students-rips-2025-los-angeles/
Williams College	multiple projects	https://math.williams.edu/small/

Allow Non-US Citizens or Residents (but must be self funded)

Institution	Topic	Website
Auburn University	Algebra and discrete math	https://cws.auburn.edu/apspi/pm/mathreu
Texas State University	Algebra, Combinatorics, and Statistics	https://summerreu.wp.txstate.edu/
University of Connecticut	multiple projects	Note: not updated, but ran in 2024 https://mathreu.uconn.edu/

For Graduating or Graduated Students

Institution	Topic	Website
Air Force Research Laboratory	multiple	https://orise.ora.gov/afrl/
Department of Energy	multiple	https://science.osti.gov/wdts/suli
Institute for Advanced Study	Quantum Computation	https://www.ias.edu/pcmi
Institute of Science and Technology Austria	Mathematics	https://phd.pages.ist.ac.at/isternship/
Polymath REU	multiple projects	https://geometrynyc.wixsite.com/polymathreu
San Diego State University Foundation	multiple projects	http://www.sci.sdsu.edu/math-reu/index.html
University of California at Los Angeles	Industrial Projects	https://www.ipam.ucla.edu/programs/student-research-programs/research-in-industrial-projects-for-students-rips-2025-los-angeles/

Concerning Education or Math Education (including opportunities for graduates who teach K12)

Institution	Topic	Website
California State University Chico	teachers	https://www.csuchico.edu/math/reu-ret.shtml
North Dakota State University	education research	https://www.ndsu.edu/dber/reu_program/reu_application/
PROMYS	teachers	https://promys.org/home

Also, please consult the NSF list of REUs in STEM education https://www.nsf.gov/crssprgm/reu/list_result.jsp?unitid=10021

With Travel Opportunities

Institution	Topic	Website
Rutgers University (DIMACS)	Algorithms	http://dimacs.rutgers.edu/REU/
University of California at Los Angeles	Industrial Projects	https://www.ipam.ucla.edu/programs/student-research-programs/research-in-industrial-projects-for-students-rips-2025-singapore/
Institute of Science and Technology	Mathematics	https://phd.pages.ist.ac.at/isternship/

For Historically Excluded Groups

(many programs strongly encourage minority and female students to apply, but these are explicitly for such groups)

Institution	Topic	Website
Big Ten Academic Alliance	multiple	https://www.btaa.org/resources-for/students/srop/overview
CIA (for students at MSI)	multiple	https://www.cia.gov/careers/student-programs/
New York University	Aging research	https://publichealth.nyu.edu/departments/biostatistics/pipelines-quantitative-aging-research-summer-program
Salk	biomedical	https://www.salk.edu/about/our-community/summer-research-opportunities/
University of Washington Bothell	multiple projects	https://reuwb.wordpress.com

Other Sources to Find REUs and Internships

Source	Area	Link
American Mathematical Society	math	http://www.ams.org/opportunities
American Statistical Association	data science	https://stattrak.amstat.org/2024/12/02/2025-internships/
Central Intelligence Agency	multiple	https://www.cia.gov/careers/student-programs/
Department of Energy	multiple	https://science.osti.gov/wdts/suli
Department of Homeland Security	multiple	https://orise.orau.gov/internships-fellowships/undergraduates.html
Lincoln Laboratory, MIT	multiple	https://careers.ll.mit.edu/search/?q=%22Summer%22
National Science Foundation	math	https://www.nsf.gov/crssprgm/reu/list_result.jsp?unitid=5044
National Science Foundation	computer science	https://www.nsf.gov/crssprgm/reu/list_result.jsp?unitid=5049
National Science Foundation	education	https://www.nsf.gov/crssprgm/reu/list_result.jsp?unitid=10021
National Security Agency	multiple	https://www.intelligencecareers.gov/nsa/students-and-internships
NSF Research Ambassadors	multiple	https://orise.orau.gov/ncses/
Pathways to Science	multiple	https://pathwaystoscience.org/programs.aspx?adv=adv
Simons Foundation	multiple	https://www.simonsfoundation.org/summer-at-simons/
Zintellect	multiple	https://www.zintellect.com/Catalog

History of the annotated list

Initiated by William Yslas Vélez (The University of Arizona)

Project Director:

Initial – 2022: William Yslas Vélez, The University of Arizona

2022 – Present: Amanda Laubmeier, Texas Tech University

When William Vélez was Director of the Math Center at The University of Arizona (UA) he wanted more mathematics majors to apply to summer research programs (REU) and internships. However, when one looks at the list of programs supported by the National Science Foundation (NSF), one sees that most require upper division mathematics courses and programming skills. Most do, but not all.

The importance of computing skills cannot be over-emphasized for undergraduates. Not only are these skills important in being competitive for summer programs, but they are also important locally. There are positions on campus where programming skills can provide not only an educational experience but also a source of income for students. Some firms actually hire undergraduates to perform programming work for them.

Vélez decided to go over the list of REU sites on the NSF website to look for unusual programs, programs where a talented first or second year student could apply. Initially, the Annotated List was directed towards UA students. At one of the national mathematics meetings, Frank Morgan asked Vélez to give this broader dissemination. To accomplish this meant giving the Annotated List more content and more information about internships. We hope that this list proves useful to the mathematical community.

Current contact for questions/recommendations

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** To guarantee I do not forget about any information when I update the list, please send any corrections/additions via this form <https://forms.gle/CRXFBDGvFoy82bzU7> **