Guide to Undergraduate Research Experiences

Created by: The UB Undergraduate Research Team

The Center for Undergraduate Research and Creative Activities (CURCA)
The Undergraduate Academies
UB-STEM
Fellowships and Scholarships
The Honors College
The Ronald E. McNair Scholars Program
The Energy Systems Institute
The Collegiate Science and Technology Entry Program (CSTEP)
Louis Stokes Alliance for Minority Participation (LSAMP)
UB Libraries
Why Do Research?

**Educational Benefits Include:**
- Working closely with a faculty mentor
- Learning about issues, methods, and leaders in students' chosen fields
- Applying concepts learned in coursework to "real life" situations
- Sharpening problem-solving skills
- Learn to read primary literature

**Professional Benefits Include:**
- Exploring and preparing for future careers
- Developing marketable skills
- Enhancing professional communication skills
- Collaborating with others and working effectively as part of a team

**Personal Benefits Include:**
- Growing as a critical, analytical, and independent thinker
- Meeting challenges and demonstrating the ability to complete a project
- Discovering personal interests
- Developing internal standards of excellence

How Do You Find a Research Position?
- Research Your Options
- Talk to Professors
- Use Your Resources!
  - UB Center for Undergraduate Research and Creative Activities (CURCA)
    http://curca.buffalo.edu
  - WebGuru- Guide to Research for Undergraduates
    http://www.webguru.neu.edu/welcome

Tips for a Successful Application
- Get organized!
- Follow directions and pay attention to the guidelines (especially deadlines)
- Demonstrate strong writing skills
- Your application reflects care (attention to detail, editing, completeness) (For tips and assistance with writing, check out UB’s Writing Place http://tlc.buffalo.edu/lcwrite.htm)
- Focus your personal statement (reveal your interest in and motivation for research)
- Have strong letters of reference (be sure to contact references early and provide them with your information)
- Make sure your application reflects your interest in the field of research
- Make sure your professional goals are in line with program guidelines
UB and Local Summer Research Opportunities

- **Center for Children and Families**
  Karen Fumerelle  
  106 Diefendorf Hall  
  3435 Main Street, Buffalo, NY 14214  
  716-829-2244  
  [http://ccf.buffalo.edu/intern_employ.php](http://ccf.buffalo.edu/intern_employ.php)

- **Summit ADHD Center Summer Treatment Program**
  150 Stahl Road  
  Getzville, NY 14068-1219  
  716-629-3445  

- **Collegiate Science and Technology Entry Program (CSTEP)**
  Shanna Crump-Owens, Director  
  222 Norton Hall, 645-2002  
  sicrump@buffalo.edu  

- **Hauptman-Woodward Medical Research Institute Summer Program**
  Dr. Jane Griffin, 898-8618  
  700 Ellicott St. Buffalo, NY 14203-1102  
  griffin@hwi.buffalo.edu  
  [http://www.hwi.buffalo.edu/outreach/internships.html](http://www.hwi.buffalo.edu/outreach/internships.html)

- **LSAMP (Louis Stokes Alliance for Minority Participation)**
  Dr. Letitia Thomas, Regional Coordinator  
  255 Capen Hall  
  lthomas@buffalo.edu  

  Drexel Gidney; Regional Coordinator  
  410 Bonner Hall, 645-0963  
  gidney@eng.buffalo.edu  
  [http://cads.buffalo.edu/ustem/lsamp.php](http://cads.buffalo.edu/ustem/lsamp.php)

- **McNair Scholars Program**
  Dr. Susan Ott, Director  
  220 Norton Hall, 645-5478  
  sjott@buffalo.edu  
  [http://cads.buffalo.edu/mcnair/index.php](http://cads.buffalo.edu/mcnair/index.php)
• **Roswell Park Cancer Institute Summer Program**  
  Dr. Adam Kisailus, 1-877-275-7724  
  Elm and Carlton Streets, Buffalo, NY 14263  
  adam.kisailus@roswellpark.org  
  [http://www.roswellpark.edu/education/summer-programs](http://www.roswellpark.edu/education/summer-programs)

• **CLIMB UP for Summer Research**  
  Liz Marshall  
  102 Farber Hall, 3435 Main Street  
  Buffalo, NY 14214  
  climb@buffalo.edu  
  [http://www.acsu.buffalo.edu/~climb/CLIMBUP.html](http://www.acsu.buffalo.edu/~climb/CLIMBUP.html)

• **School of Medicine and Biomedical Sciences Summer Undergraduate Research Experience**  
  Liz White  
  128 Biomedical Education Building  
  Buffalo, NY 14214  
  lizwhite@buffalo.edu  
  [http://medicine.buffalo.edu/education/undergraduate/sure.html](http://medicine.buffalo.edu/education/undergraduate/sure.html)
SYNOPSIS
The Research Experiences for Undergraduates (REU) program supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation. REU projects involve students in meaningful ways in ongoing research programs or in research projects designed especially for the purpose. This solicitation features two mechanisms for support of student research: (1) REU Sites are based on independent proposals to initiate and conduct projects that engage a number of students in research. REU Sites may be based in a single discipline or academic department, or on interdisciplinary or multi-department research opportunities with a coherent intellectual theme. Proposals with an international dimension are welcome. A partnership with the Department of Defense supports REU Sites in DoD-relevant research areas. (2) REU Supplements may be requested for ongoing NSF-funded research projects or may be included as a component of proposals for new or renewal NSF grants or cooperative agreements.

Undergraduate student participants in either Sites or Supplements must be citizens or permanent residents of the United States or its possessions.

Students apply directly to REU Sites. A directory of active REU Sites, along with contact information, can be found on the Web at http://www.nsf.gov/crssprgm/reu/index.jsp

Sampling of Research Areas

Astronomical Sciences
Atmospheric Sciences
Biological Sciences
Chemistry
Computer and Information Science and Engineering
Department of Defense (DoD)
Earth Sciences
Education and Human Resources
Engineering
Ethics and Values Studies
International Science and Engineering
Materials Research
Mathematical Sciences
Ocean Sciences
Physics
Polar Programs
Social, Behavioral, and Economic Sciences
Arts & Humanities:

**Note:** this is just a sampling; students should work with Faculty in their Department & Academic Advisors to identify other summer experience opportunities.

- Academy of Television Arts and Sciences Foundation Student Internship Program
- Alden Dow Creativity Fellowship Program
  - [http://www.northwood.edu/creativitycenter/](http://www.northwood.edu/creativitycenter/)
- Alvin Ailey American Dance Theater Summer Intensive Program
  - [http://www.theaileyschool.edu/ailey-school/professional-division/programs/summer-intensive-program](http://www.theaileyschool.edu/ailey-school/professional-division/programs/summer-intensive-program)
- American Dance Festival Summer Internships
  - [http://www.americandancefestival.org/internships/internships.html](http://www.americandancefestival.org/internships/internships.html)
- Bates Dance Festival Three-Week Professional Training Program and Internship Program
  - [http://abacus.bates.edu/dancefest/internships.php](http://abacus.bates.edu/dancefest/internships.php)
- Collegiate Inventors Competition
  - [http://www.invent.org/Collegiate/overview.html](http://www.invent.org/Collegiate/overview.html)
- Fund for American Studies, Institute on Philanthropy and Voluntary Service
  - [http://www.dcinternships.org/](http://www.dcinternships.org/)
- George Mason University Institute for Humane Studies Fellowships
  - [http://www.theihs.org/programs/humane-studies-fellowships](http://www.theihs.org/programs/humane-studies-fellowships)
- Glimmerglass Opera Summer Internships
- Institute for Humane Studies Summer Seminars and Young Communicators Fellowships
  - [http://www.theihs.org/node/116](http://www.theihs.org/node/116)
- Institute for Recruitment of Teachers
  - [http://www.andover.edu/SummerSessionOutreach/IFROTeachers/Pages/default.aspx](http://www.andover.edu/SummerSessionOutreach/IFROTeachers/Pages/default.aspx)
- Jacob's Pillow Dance Festival Intern Program
  - [http://www.jacobspillow.org/home/summer-internships.asp](http://www.jacobspillow.org/home/summer-internships.asp)
- Metropolitan Museum of Art Internship Programs
  - [http://www.metmuseum.org/education/er_internship.asp](http://www.metmuseum.org/education/er_internship.asp)
- Multicultural Undergraduate Summer Internships at the Getty Center
  - [http://www.getty.edu/foundation/funding/leaders/current/multicultural_undergrad_internships.html](http://www.getty.edu/foundation/funding/leaders/current/multicultural_undergrad_internships.html)
- Smithsonian Institution Minority Student and Native American Awards Program
  - [http://www.si.edu/ofg/ofgapp.htm](http://www.si.edu/ofg/ofgapp.htm)
- Smithsonian Institution Opportunities for Research and Study
  - [http://www.si.edu/ofg/intern.htm](http://www.si.edu/ofg/intern.htm)
- Student Conservation Association (SCA) Expense-Paid Conservation Internships
  - [http://www.thesca.org/conservation_internships/](http://www.thesca.org/conservation_internships/)
- University Film and Video Association Carole Fielding Student Grants
- University of Michigan Rackham Summer Research Opportunity Program
- University of Michigan's Health Management Summer Enrichment Program
  - [http://www.sph.umich.edu/sep/](http://www.sph.umich.edu/sep/)
- Washington Post, Journalism Internships
  - [http://intern.washpost.com/how-to-apply.cfm](http://intern.washpost.com/how-to-apply.cfm)
Behavioral & Social Sciences

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- American Geological Institute (AGI) Government Affairs Program. (AGI/AIPG)
- American Political Science Association Ralph Bunche Summer Institute
  - http://www.apsanet.org/content_6602.cfm
- American Psychological Association Summer Science Fellowship (SSF)
- American Rivers
  - http://www.americanrivers.org/about-us/jobs/
- American Sociological Association (ASA) Minority Research Fellowship
  - http://www.asanet.org/funding/mfp.cfm
- AT&T Research and Internship Opportunities
- Baxter Internship Programs
- Behavioral Health Research Experience for Undergraduates: Mental Health & Substance Abuse
  - http://www.cbcs.usf.edu/Research/SRI/
- Brookings Institute Summer Internship Opportunities
  - http://www.brookings.edu/about/employment
- California Senate Fellows
  - http://www.csus.edu/calst/capital_fellows_programs_overview.html
- California State University, Sacramento - Jesse M. Unruh Assembly Fellowship Program
  - http://www.csus.edu/calst/assembly/
- California State University, Sacramento - Judicial Administration Fellowship Program
  - http://www.csus.edu/calst/judicial/
- Carnegie Endowment for International Peace
  - http://www.carnegieendowment.org/about/index.cfm?fa=jrFellows
- Center for Science in the Public Interest: Public Interest Internship Program
  - [http://www.cspinet.org/about/jobs/200801042.html](http://www.cspinet.org/about/jobs/200801042.html)
- Center for Strategic and Budgetary Assessments
  - [http://www.csbaonline.org/about/careers/](http://www.csbaonline.org/about/careers/)
- Center for Strategic and International Studies (CSIS)
  - [http://csis.org/about-us/internships](http://csis.org/about-us/internships)
- Center on Budget and Policy Priorities Internship Program
- Children’s Defense Fund Internship Opportunities
- Colorado State University REU Summer Research Program on Mind and Brain
  - [http://psy.psych.colostate.edu/reu/index.asp](http://psy.psych.colostate.edu/reu/index.asp)
- Common Cause
- Congressional Hispanic Caucus Institute, Inc. (CHCI) - Public Policy Fellowship Program
- Congressional Hispanic Caucus Institute, Inc. (CHCI) Congressional Internship
  - [http://www.chci.org/internships](http://www.chci.org/internships)
- County of Orange Volunteer/Intern position
  - [http://egov.ocgov.com/portal/site/ocgov/menuitem.4981dc715fc6e27bdadd603d10000f7/?vgnextoid=d41d0618f2fc5110VgnVCM1000000100007fCRD&vgnextfmt=default](http://egov.ocgov.com/portal/site/ocgov/menuitem.4981dc715fc6e27bdadd603d10000f7/?vgnextoid=d41d0618f2fc5110VgnVCM1000000100007fCRD&vgnextfmt=default)
- Environmental Protection Agency's National Network for Environmental Management Studies
  - [http://www.epa.gov/enviroed/students.html](http://www.epa.gov/enviroed/students.html)
- FBI, Honors Internship Program
- Federal Reserve Undergraduate Project Internships
  - [http://www.federalreserve.gov/careers/intern_project.htm](http://www.federalreserve.gov/careers/intern_project.htm)
- Foreign Policy Research Institute
  - [http://www.fpri.org/about/jobs.html](http://www.fpri.org/about/jobs.html)
- Fund for American Studies - American Institute on Political and Economic Systems
  - [http://www.tfasinternational.org/aipes/about/](http://www.tfasinternational.org/aipes/about/)
- Fund for American Studies - Capital Semester Academic & Internship Program
  - [http://www.dciinternships.org/cs/about](http://www.dciinternships.org/cs/about)
- Fund for American Studies - Engalitcheff Institute on Comparative Political & Economic Systems
  - [http://www.dciinternships.org/icpes/about/](http://www.dciinternships.org/icpes/about/)
- Fund for American Studies - The Bryce Harlow Institute on Business and Government Affairs
  - [http://www.dciinternships.org/bhibga/](http://www.dciinternships.org/bhibga/)
- Fund for American Studies, Institute on Philanthropy and Voluntary Service
  - [http://www.dciinternships.org/ipvs/about/index.asp](http://www.dciinternships.org/ipvs/about/index.asp)
- Global Change Education Program - Summer Undergraduate Research Experience (SURE)
  - [http://www.atmos.anl.gov/gcep/SURE/](http://www.atmos.anl.gov/gcep/SURE/)
- Harvard University's Harvard Forest Summer Research Program in Ecology
  - [http://harvardforest.fas.harvard.edu/education/reu](http://harvardforest.fas.harvard.edu/education/reu)
- Institute for Humane Studies Summer Seminars
  - [http://www.theihs.org/summer-seminars](http://www.theihs.org/summer-seminars)
- Institute for Humane Studies Internship Programs
  - [http://www.theihs.org/internship-programs](http://www.theihs.org/internship-programs)
- Institute of Ecosystem Studies
  - [http://www.ecostudies.org/reu.html](http://www.ecostudies.org/reu.html)
- National Academy of Social Insurance Internships
  - [http://www.nasi.org/REU opportunitiests](http://www.nasi.org/REU opportunitiests)
- National Science Foundation REU Sites--Social, Behavioral, and Economic Sciences
- REU Field School in Archaeology at New Philadelphia
  - [http://www.histarch.uiuc.edu/NSF/fieldschool.html](http://www.histarch.uiuc.edu/NSF/fieldschool.html)
- Smithsonian Center for Materials Research and Education, Archaeological Conservation Program Internships
  - [http://www.si.edu/mci/english/professional_development/fellowships_internships.html](http://www.si.edu/mci/english/professional_development/fellowships_internships.html)
- The American Economic Association Summer Program and Minority Scholarship Program
- U.C. Berkeley Public Policy and International Affairs (UC-PPIA) Summer Institute
  - [http://gspp.berkeley.edu/ppia/index.html](http://gspp.berkeley.edu/ppia/index.html)
- U.S. Department of Homeland Security (DHS) HS-STEM Summer Internship Program
  - [http://www.orau.gov/dhsinternships/](http://www.orau.gov/dhsinternships/)
- U.S. Department of State Summer Internship Program
  - [http://www.state.gov/m/a/c15164.htm](http://www.state.gov/m/a/c15164.htm)
- University of Maryland Summer Research Initiative, College of Behavioral & Social Sciences
  - [http://www.bsos.umd.edu/diversity/summer-research-initiative.aspx](http://www.bsos.umd.edu/diversity/summer-research-initiative.aspx)
- University of Michigan's Health Management Summer Enrichment Program
  - [http://www.sph.umich.edu/sep/apply/application.html](http://www.sph.umich.edu/sep/apply/application.html)
- University of Notre Dame Summer Fellowship in Biocultural Anthropology
  - [http://www.nd.edu/~nsfbones/nsfbones/Home.html](http://www.nd.edu/~nsfbones/nsfbones/Home.html)
**Note:** this is just a sampling; students should work with Faculty in their Department & Academic Advisors to identify other summer experience opportunities.

- Duke University Department of Biology- Fellowships and Summer Research Opportunities
  - This site lists opportunities both within and outside of Duke for many different fields of biological science and medicine

- American Society for Microbiology, Microbiology Undergraduate Research Fellowship

- American Society for Microbiology, Undergraduate Research Fellowship Program

- American Society for Pharmacology and Experimental Therapeutics Summer Undergraduate Research Fellowship Program
  - [http://www.aspet.org/awards/SURF/](http://www.aspet.org/awards/SURF/)

- Association of Public Health Laboratories Emerging Infectious Diseases Laboratory Fellowship Program

- Carnegie Institute of Washington Geophysical Laboratory Summer Intern Program
  - [http://people.gl.ciw.edu/summerscholars/about.html](http://people.gl.ciw.edu/summerscholars/about.html)

- Maryland Sea Grant College NSF Research Experiences for Undergraduates in Marine Research
  - [http://www.mds.g.umd.edu/programs/research/reu/](http://www.mds.g.umd.edu/programs/research/reu/)
- National Aeronautics and Space Administration
  - Cooperative Education Program, [http://www.nasa.gov/offices/education/programs.descriptions/NASA_Cooperative_Education_Program.html](http://www.nasa.gov/offices/education/programs.descriptions/NASA_Cooperative_Education_Program.html)
  - Langley Aerospace Research Summer Scholars [http://www.nasa.gov/offices/education/programs.descriptions/Langley_Aerospace_Research_Summer_Scholars_Project.html](http://www.nasa.gov/offices/education/programs.descriptions/Langley_Aerospace_Research_Summer_Scholars_Project.html)
  - Undergraduate Student Research Program [http://usrp.usra.edu/](http://usrp.usra.edu/)

- National Institutes of Health, Research and Training Opportunities at the NIH

- National Institute of Standards and Technology, Summer Undergraduate Research Fellowship
  - [http://www.surf.nist.gov/surf2.htm](http://www.surf.nist.gov/surf2.htm)

- Smithsonian Astrophysical Observatory, Summer Intern Program

- Smithsonian Environmental Research Center, Internship Program in Environmental Studies
  - [http://www.serc.si.edu/pro_training/internships/internships.aspx](http://www.serc.si.edu/pro_training/internships/internships.aspx)

- Smithsonian National Museum of Natural History, Research Training Program
  - [http://www.si.edu/ofg/intern.htm](http://www.si.edu/ofg/intern.htm)

- Smithsonian National Zoological Park, Internships and Fellowships
  - [http://nationalzoo.si.edu/UndergradInternships/](http://nationalzoo.si.edu/UndergradInternships/)

- Smithsonian Tropical Research Institute, Internship Opportunities

- University Corporation for Atmospheric Research, Significant Opportunities in Atmospheric Research and Science
  - [http://www.soars.ucar.edu/](http://www.soars.ucar.edu/)
University of Minnesota

- Life Sciences Undergraduate Research Programs
  [http://www.cbs.umn.edu/lssurp/](http://www.cbs.umn.edu/lssurp/)
- Materials Research Science & Engineering Center, Research Experience for Undergraduates Program
  [http://mrsec.umd.edu/REU/](http://mrsec.umd.edu/REU/)
- Multicultural Summer Research Opportunities Program
  [http://www.grad.umn.edu/outreach/research/MSROP/](http://www.grad.umn.edu/outreach/research/MSROP/)
- School of Physics and Astronomy Research Experiences for Undergraduates
- Summer Research Experiences of Undergraduates in Mathematics
- Undergraduate Research Experiences in Electrical & Computer Engineering
  [http://www.ece.umn.edu/groups/nsfreu/](http://www.ece.umn.edu/groups/nsfreu/)
- UMN Chemistry Summer Undergraduate Research Fellows Program
  [http://www.chem.umn.edu/lando/](http://www.chem.umn.edu/lando/)
- Undergraduate Research Program in Cognitive Sciences
**Medicine and Pharmacy**

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- Association of American Medical Colleges- GREAT Group Educational Links- Summer Undergraduate Research Programs
  - Link to a list of over 30 institutions and their summer research opportunities related to medicine and pharmaceutical sciences:
    - [http://www.aamc.org/members/great/summerlinks.htm](http://www.aamc.org/members/great/summerlinks.htm)

- Duke University Department of Biology- Fellowships and Summer Research Opportunities
  - This site lists opportunities both within and outside of Duke for many different fields of biological science and medicine

- Loyola University, Microbiology and Immunology Undergraduate Summer Research Program

- Mount Sinai Center for Multicultural and Community Affairs, Summer Research Fellowship Program
  - [http://www.mssm.edu/education/graduate-school/degrees-and-programs/summer-undergraduate-research-program](http://www.mssm.edu/education/graduate-school/degrees-and-programs/summer-undergraduate-research-program)

- Ohio University Summer Undergraduate Research Fellowship, College of Osteopathic Medicine

- Penn State College of Medicine, Summer Undergraduate Research Internship Program
  - [http://www.hmc.psu.edu/summerresearch/](http://www.hmc.psu.edu/summerresearch/)

- University of California, San Francisco, School of Pharmacy Summer Research Training Program

- UK College of Pharmacy Summer Research Programs
  - [http://pharmacy.mc.uky.edu/programs/graduate/srp.php](http://pharmacy.mc.uky.edu/programs/graduate/srp.php)

- University of Utah, Department of Pharmaceutics and Pharmaceutical Chemistry, Summer Undergraduate Research Admissions
  - [http://www.pharmacy.utah.edu/pharmaceutics/phdprogram/surf_undergrad.html](http://www.pharmacy.utah.edu/pharmaceutics/phdprogram/surf_undergrad.html)

- University of Pittsburgh, Pharmacy Summer Research Internships
- Washington State University, Summer Undergraduate Research Fellowships
  - [http://universitycollege.wsu.edu/units/undergraduateresearch/programs-funding/](http://universitycollege.wsu.edu/units/undergraduateresearch/programs-funding/)

- National Institute of Environmental Health Sciences, Summer Opportunities

- University of Cincinnati, Summer Undergraduate Research Fellowships, Biomedicine
  - [http://www.med.uc.edu/SURF/](http://www.med.uc.edu/SURF/)

- The Sackler Institute of Graduate Biomedical Sciences of New York University's School of Medicine, Summer Undergraduate Research Program (SURP)
  - [http://www.med.nyu.edu/sackler/programs/summer.html](http://www.med.nyu.edu/sackler/programs/summer.html)