



Application Form for Empirical, Experimental, or Theoretical Research

UROP Team Grant

The Undergraduate Research Opportunities Program offers up to \$3000 per project, not to exceed \$1200/student, for teams of 2 undergraduates or more who collaborate with faculty on research or creative work. These grants also provide support for course-related or capstone projects, up to \$1000 per project, not to exceed \$250 per student. Projects may be of faculty or student design, but in all cases students must function as researchers or co-researchers with responsibilities that would exceed those of a student assistant.

If you have questions, please visit our website: www.colorado.edu/Research/UROP/studgrants.htm

Faculty Sponsor Tom Brown		Rank Senior Instructor	Department ECEE
Campus Box Number UCB 425	Telephone Number 303-492-4190	CU Email Address tomb@colorado.edu	
The attached proposal was written by: Faculty Sponsor <input type="checkbox"/> Student(s) <input checked="" type="checkbox"/>	Number of Students 5	Dates student participation will begin and end Jan. 17 - May 3 2012	
Project Title eyeCU			
How much are you requesting from UROP? \$1006.61	Is funding available from other sources? If so, from where and how much? Pending Approval: EEF, \$200		

Please attach an abstract of the project and a proposal using no more than five double-spaced pages (see Narrative Proposal Section). Include in your proposal:

- Describe the roles the students will play on the project
- If this is not a student-designed project, discuss opportunities for students to co-author published works
- Include a detailed budget justifying student stipend requests and/or an expense allowance

If the team sponsor is not a tenure-track faculty member, a copy of the sponsor's curriculum vitae should also be included. If the undergraduate members of the team have been selected, please complete the back of this form; otherwise submit student names after they've been selected.

Faculty Sponsor's Signature: _____ Date: _____

(over)

Student Team Members

1. Name: Arielle Blum Student ID Number: 810072516
3. Address: 600 Tantra Drive Boulder, CO 80305
4. Telephone Number(s): 303-565-0926 5. Major: Electrical Engineering
6. CU Email Address: amblum@colorado.edu 7. Graduation Date: May 2012

1. Name: Armeen Taeb Student ID Number: 830301305
3. Address: 3622 Castle Peak Superior, CO 80027
4. Telephone Number(s): 303-859-9350 5. Major: Applied Mathematics and EE
6. CU Email Address: Armeen.Taeb@Colorado.EDU 7. Graduation Date: May 2013

1. Name: Nick Bertrand Student ID Number: 995095519
3. Address: 9195 Bear Creek Apartments Boulder, CO 80310
4. Telephone Number(s): 719-310-7701 5. Major: Applied Mathematics and ECE
6. CU Email Address: Nicholas.Bertrand@Colorado.EDU 7. Graduation Date: May 2012

1. Name: Mike Mzingo Student ID Number: 810731459
3. Address: 4920 Meredith Way Apt. 304 Boulder, CO 80301
4. Telephone Number(s): 719-232-0525 5. Major: Electrical and Computer Engineering
6. CU Email Address: Michael.Mzingo@colorado.edu 7. Graduation Date: May 2012

1. Name: Khashi Xiong Student ID Number: 810664620
3. Address: 953 Olin Court Erie, CO 80516
4. Telephone Number(s): 720-883-7075 5. Major: Electrical Engineering
6. CU Email Address: Khashi.Xiong@Colorado.EDU 7. Graduation Date: May 2012

Narrative Proposal Section

Attach a narrative proposal, 5 pages maximum, outlining your request for funding. Please attempt to write the proposal in terms a non-expert can understand, though you may have to use technical language in some places as well. The narrative should include:

- 1. Introduction:** State your research question. Tell us the objectives and purpose of both your portion of the work and those of the larger project within which yours is embedded if applicable, including its purpose and function within the students' degree requirements or academic or professional training or goals. Discuss the location of the research (laboratory or work site) and who will supervise students if not the faculty sponsor. Address the project's relevance and who will benefit from it. Supply justification for any off-site research.
- 2. Background:** Situate this project with other research in the field by providing a review of the work that has already been done in this area. Discuss what theoretical tradition(s) you are drawing from that influence your approach to this project. If conducting community-based, action research situate the project in the known academic or community/international development literature relevant to your approach for this project. The students' own research experiences and how they have fulfilled the necessary background work for attempting this project should be included, as well as a discussion of the faculty sponsor's expertise.
- 3. Methods:** Provide a detailed description of the research or design methods that will be used in the project. This should include justification for the specific approach or methods that will be employed. If applicable, discuss whether you'll be working with primary or secondary sources (or both) and/or what data will be the basis for your project. If you're using human subjects you should address how you'll find subjects, your methods for approaching them and gaining trust, how you'll deal with language or other barriers, how you plan to get Institutional Review Board (IRB) approval for the research protocol, and so on. If conducting community-based, participatory action research, describe the collective approach of your methods: how community/local participants will be engaged in the research, how results of the research will be published or disseminated to community/local stakeholders, how results of your collaboration with the community will be implemented in practice (or praxis), and in what forms you plan to document project outcomes for those interested in your field or the project's subject matter.
- 4. Time Schedule:** Provide a step-by-step outline of the project including dates for the initiation and completion of each phase. Attempt to lay out a reasonable schedule taking into consideration all stages of the research as well as writing of the final report. Include how often you'll meet with your faculty sponsor.
- 5. Budget Justification:** Explain how you will use the funds you have requested on your Budget Requisition.

Reference Section: Attach an alphabetical list of all work you've consulted in your background research and cited in the body of your narrative, in appropriate professional style customary for your discipline. Your bibliography should show that you've done the necessary preparation for this project.

Appendices: Attach any surveys or interviews you'll use in the research, permission for Human Subject Research, etc.

Abstract of the project

On a separate page (not included in the 5-page maximum narrative) provide a 100-word description of the research project, including its objectives or the objectives of the larger project within which yours is embedded.