

UCI WATER-PIRE

SMARTSTART EVALUATION NEWSLETTER



Findings are presented from the baseline survey completed by UPP Down Under students in 2013, 2014, and 2015 and interviews conducted with research abroad participants.

Undergraduate PIRE Program (UPP) Down Under: Baseline Survey Results

UPP Down Under Participation: 2013-2015







with 39% from Environmental Engineering.

Strengths and Contributions

When asked what contributions they could make to the PIRE program, several students in 2013 and 2014 talked about teamwork, but only 1 student in 2015 mentioned teamwork as a contribution. The 2015 responses are below:



Career Goals and Workforce Development

Students' participation in seminars and knowledge of career opportunities and contacts declined from 2014, but 54% of 2015 students know where to look and who to contact to pursue a career in the field of urban water sustainability.

17

201320102015

% know



% attended at least one seminar or lecture from a professor to learn about research.



at least one for career seminar from in the field. professional in the field.



% know who where to look to contact to pursue a job opportunities in the field.

Reasons for Joining PIRE Project in 2015

Most students joined PIRE to explore research and future academic and career paths. All themes and the percentage of students who mentioned them are shown below.



Baseline Knowledge

Students' baseline knowledge has grown since 2013.

Climate change predictions for Southwest US	3.33	Ratings of familiarity on
Filtration	3.25	knowledge items
Sedimentation	3.25	2013 cohort
Contominants in sources	2.25	2014 cohort
Nitrification /do nitrification	5.25	2015 cohort
Nitrification/de-nitrification	3.17	4

At baseline, students were not at all familiar with the following items, indicating focus areas for instruction.

- Value, equity considerations and regional planning and governance associated with low-energy options
- Economic approaches for identifying optimal water supply options at the watershed scale
- Photochemical oxidation
- Energy and greenhouse gas savings associated with biofilter relative to conventional water supplies
- Climate change predictions for SE Australia
- Hyporheic exchange

Interviews with Research Abroad Experience (RAE) Participants

Findings are presented from 15-minute Skype interviews with 10 out of 15 participants who worked with Australian partners, including three postdocs, three recent PhD graduates, two PhD candidates, and two PhD students.



Evaluator's Recommendations

UPP Down Under

- Ask questions on the UPP Down Under applications about teamwork to ensure students are willing to work in a collaborative and team-oriented environment.
- Increase instruction on all baseline knowledge items with which students had *no familiarity* during lectures and activities to continue to build student knowledge.
- Ensure the program includes information about graduate school and careers in urban water sustainability.
- Disseminate information to undergraduate students about research seminars and career-related presentations to build knowledge before UPP Down Under.
- Help students make connections with domestic and international researchers so they can be part of future grant opportunities.



- Provide more students the opportunity to go to Australia more than once, which will not only enhance research, but foster partnerships.
- If students are unable to travel abroad, help them foster relationships with Australian partners through Skype calls and educational seminars.
- Continue to include US and Australian graduate students and postdocs in the teaching/mentoring of UPP Down Under students to build teaching/mentoring skills.
- Help foster connections with Australian partners and provide opportunities for continued collaboration such as papers, presentations and proposals.
- Ensure all graduate students can identify a mentor and know how to collaborate with him/her.



