Undergraduate Research Programs
CUR National Conference
25 June 2012
College of New Jersey
New CUR Book

Showcases offices and programs of undergraduate research at a variety of institutional types at various points of maturity.

Each of the model chapters is devoted to an institutional type and follows a template, making it easy for the reader to browse chapters and trace a particular theme.
Common Components of UR Offices & Programs

Typical structures
- Director
- Program manager/coordinator
- Program assistant/administrative assistant/graduate student assistant
- Student assistants (paid; volunteer)
- Faculty advisory board, student advisory board

Strategic plan and goals

Programs
- Student workshops on professional development
- Summer research program
- Academic year programs
- Peer experiences for student researchers
- Responsible conduct of research, IRB and other compliance training

Coordination with other units (advisors, Honors Center, orientation, Student Affairs, Fellowships & Scholarships)
Components (cont’d)

- Major symposium/celebration event for students to present their projects
- Funding for students – travel awards, mini-grants, stipends, scholarships
- Fundraising – grant proposals, philanthropy/development
- Monitoring undergraduate research – indicators of participation, posters, theses, publications
- Assessment of impact

- Communication strategy
  - Outreach to undergrads, graduate students, faculty, administrators, & university community
  - Participation/inclusion in university public relations (to alumni, public, donors, trustees, high school students)

- Website – resources for students, announcements, feature stories, application forms
Examples of Other Components

- Recognition/merit awards - for students, faculty
- Campus UG research journal
- Newsletter
- Mentor training for faculty, postdocs, and graduate students
- Research opportunities for freshmen and sophomores
- Curriculum development and UGR course(s) - coordinated by URO
- Coordinating service-learning/community research
- Selected student ambassadors to help with outreach and programming
- International research funding
- Residence Hall programs
- Establishing department liaisons
- Special programs or programs funded by federal or foundation grants
COEUR

Another new CUR publication

--A good reference for directors of undergraduate research programs

Conference Presentations
Session #4: Monday, 9:45-11:00
   SSB-321
Session #6: Tuesday, 10:15-11:30
   SSB-230

Characteristics of Excellence in Undergraduate Research (COEUR) is a summary of best practices that support and sustain highly effective undergraduate research environments. It is organized in sections that correspond to various functions or units of a typical college or university campus. In CUR’s experience, successful programs exhibit many of the characteristics enumerated in this document. Sections 2, 8, 10, 11 are especially relevant for Undergraduate Research Offices.
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**Chart of Undergraduate Research Offices**
How this session will work

- Round table of 12 individuals
- Overview of office/program
- Organizational chart
- Highlight of one program
- Lesson Learned
- Questions

Niccole Cerveny, Mesa Community College
Laura Guertin, PennState-Brandywine
Jessica Brown, CSU-Monterey Bay
Martha Jacob, Dominican University (IL)
Kelly Christopher, Loyola University Chicago
Dwight Dimaculangan, Winthrop
Jenny Olin Shanahan, Bridgewater State
Carol Bender, University of Arizona
Kimberly Saunders, University of Delaware
Linda Blockus, University of Missouri
Janice DeCosmo, U of Washington
Joyce Kinkead, Utah State University
Undergraduate Research at Two-Year Colleges

Getting Started:
- Establish a committee & name a chair
- Establish definition & mission for UR
- Survey the faculty
- Develop a plan of goals & strategies
- Write a campus white paper
Institutions Participating in the Two-Year College CUR/NCIA NSF Initiative, 2010-2012

- Rural Community College Alliance, Oklahoma City, OK
- North Hennepin Community College, N. Brooklyn Park, MN
- J. Sargeant Reynolds Community College, Richmond, VA
- Irvine Valley Community College, California
- Queensborough Community College, NYC, NY
- Malcolm X College, Chicago
- Southern Maine Community College, South Portland, ME
- Eastview Campus--Austin Community College, Texas
- Mesa Community College, Phoenix
- Jefferson State Community College, Birmingham, AL
- Edmonds Community College, Lynnwood, WA
Questions? Comments?
California State University, Monterey Bay

- Website: www.csumb.edu or www.uroc.csumb.edu
- Location: Seaside, CA
- Founded: 1994
- Institutional Type: Public
- Carnegie Classification: Undergraduate instructional program
- Number of Students: 4,795 undergraduates, 197 graduate students, 162 credential students, and 19 post-baccalaureate students
- Number of Faculty: 248
- Degree Programs: 22 bachelor’s programs, 8 master’s programs, 3 teaching-credential programs
- Founding of UR Office: January 2009
Monterey Bay: Org Chart & Staffing Structure

Org Chart
- University President
- Provost
- College Deans
- UROC

UROC Staffing Structure
- Advisory Committee
- UROC Director
- Assistant Director
- Research & Assessment Manager*
- Training Coordinator
- Research Coordinator
- Administrative Coordinator
- Student Assistants

*New position to be filled in 2012
Monterey Bay: Key Programs

- Undergraduate Research Seminar series
- Annual Mentor Training workshop
- Curriculum Development and Assessment
- Evaluation

RSCH I
- Intro. to scholarly research.
- Prep. for URE.

RSCH II
- Build on summer URE.
- Dev. deeper understanding of discipline.

RSCH III
- Prep for 2nd URE.
- Emphasis on independent research.

RSCH IV
- Advanced academic skills.
- Prep for transition to grad. school.

Challenge  Development  Application & Calibration  Achievement & Identity
Monterey Bay: Lessons Learned

- Establish, maintain, and publicize high standards.
  - Students will more than rise to the occasion; they will clamor for the opportunity.

- Build partnerships.
  - Small institutions must develop partnerships with regional institutions to expand student opportunities.

- Integrate UR into the curriculum and strengthen links with faculty through curriculum development grants.

- Cultivate champions and mentors.
Questions? Comments?
Dominican University

- Website: http://www.dom.edu/departments/ursci
- Location: River Forest, Illinois
- Founded: 1901
- Institutional Type: Private, not-for-profit/Roman Catholic
- Carnegie Classification: Master’s Colleges and Universities (larger programs)
- Number of Students: 1,953 undergraduates, 1,659 graduate/professional students
- Number of FTE faculty: 229
- Degree programs: 49 bachelor’s programs, 13 master’s programs, and one doctoral program
- Founding of UR Office: 2007
Dominican University Office of Undergraduate Research, Scholarship and Creative Investigations (URSCI)

Rosary College of Arts and Sciences (RCAS)

RCAS URSCI Standing Committee

URSCI Director

URSCI Student Worker
Dominican: Key Programs

- Undergraduate Research Assistantship Program (URAP)
- Undergraduate Summer Scholarship Program Award (USSP)
- Undergraduate Research Support Award (URSA)
- Research Course Credits
- URSCI Spring Exposition
Dominican: Lesson Learned

- Continuity is important
  - Director learning curve is high
  - Course releases help, but...
  - Student worker learning curve is high
  - Best to get a student worker for two years at least!
  - Committee learning curve is also high...
  - Switched from Advisory Board
  - Committee members have three-year tenure
Loyola University Chicago

- Website: [www.luc.edu/lurop](http://www.luc.edu/lurop) & [www.luc.edu/experiential](http://www.luc.edu/experiential)
- Location: Chicago, IL
- Founded: 1870
- Institutional Type: Private, Jesuit Catholic
- Carnegie Classification: (High) Research University, with Community Engagement designation

- Number of Students: 9,856 undergraduates, 6,184 graduate and professional students
- Number of Faculty: 650
- Degree Programs: 71 undergraduate majors and 71 minors, 85 master’s, 31 doctoral degrees, and 26 graduate-level certificate programs
- Founding of UR Office (LUROP): 2007
Loyola: Key Programs

- 13 autonomous UR fellowship programs under Loyola Undergraduate Research Opportunities Program (LUROP)
  - Fellowships covers all disciplines and years. Fund approximately 170 projects annually.

- LUROP: Shared resources for fellowship programs & other undergrad researchers
  - Marketing and recruitment
  - Student advising
  - Application system
  - Workshops and seminars
  - Travel & Mentor Awards
  - Annual symposium and Chicago Area Undergraduate Research Symposium
  - Assessment

- Engaged learning courses

- LUROP & Center for Experiential Learning = Collaborative programs
Loyola: Sample Experiential Collaborations

- New service-learning classes for community-based research
- An academic internship class for student researchers, featuring use of ePortfolios
- UR Fellowship projects developed out of service-learning classes
- A community-campus partnership that serves community research needs
- A community-engagement forum that coincides with the UR Symposium
- Plans to enhance UR benefits and impact for students through ePortfolios

Communication is key!
Winthrop University

- College UR Website: http://www2.winthrop.edu/artscience/undergradresearch/
- University UR Website: http://www2.winthrop.edu/undergradresearch/

Location: Rock Hill, SC
Founded: 1886
Institutional Type: Public
Carnegie Classification: Master’s Colleges and Universities with Larger Programs

- Number of Students: 4,933 undergraduates, 1,065 graduate students
- Number of faculty: 288
  Degree Programs: 80 bachelor’s programs, 40 master’s programs

- Founding of UR Office: College of Arts and Sciences Office, 2003; University office, 2011
Winthrop Org Chart

University URO
2011 - present
Winthrop: Key Programs

- Student Travel Funding to present research
- Undergraduate Scholarship Book of Abstracts
- Annual Undergraduate Scholars Ceremony
- Funded UR Programs: INBRE, McNair, WISE
- Big South Athletic Conference sponsorship of a regional UR meeting (BigSURS)
Winthrop: Lesson Learned

- Understanding the differences in approaches to UR among disciplines is key to promoting UR across the college and university.
  - Modeling UR Across the College
  - Making the Argument Through White Papers
  - Partnering with Other Offices and Programs (Honors, Office of Nationally Competitive Awards, etc.)
Bridgewater State University

- Website: www.bridgew.edu/our
- Location: Bridgewater, MA
- Founded: 1840
- Institutional Type: Public Comprehensive
- Carnegie Classification: Master’s Colleges and Universities (larger programs)
- Number of Students: 10,000 undergrads; 1,000 graduate students
- Number of Faculty: 439
- Degree Programs: 37 bachelor’s programs, 23 master’s programs
- Founding of UR Office: 2006
Director, Office of Undergraduate Research

2 Faculty Coordinators
(Each with 1/3 course-load reassignment to lead summer research program and review UR proposals)

Full-time Administrative Assistant

Part-time Managing Editor of campus UR journal

UR Advisory Board
24 faculty members from diversity of disciplines; each serves on 1 UR Advisory Board committee: Student Grants, Faculty Development, or Student Presentations & Publications
Bridgewater State: Key Programs

- **Adrian Tinsley Summer Research Grants** ($4,000 stipend + $500 for expenses for 45 students—any discipline)

- **Mid-Year Symposium of 1st- and 2nd-year student work** includes over 500 presenters every December

- **Undergraduate Research Symposium** every April features over 500 student presenters (mostly grant-funded and/or honors work)

- **NCUR travel grants** fund all students accepted to the conference (54 in 2012!)

- **Undergraduate Review journal** with double-blind review by two faculty in each student-writer’s discipline
Bridgewater State: Lesson Learned

UR program must meet the needs of our students.

- Over 60% are first-generation, minority, and/or low-income. Giving up paid work for research is not realistic, so summer research grants pay equivalent of $10/hour.

- We are in the “backyard” of Harvard, MIT, Boston U, Boston College, Northeastern, Smith, Brown, Amherst, Wellesley, UMass. Bridgewater is free of any pretensions of elite institutions; having over 1,000 students present UR at campus symposia every year means great access to high-impact opportunities
University of Arizona
Undergraduate Biology Research Program

- Website: www.ubrp.arizona.edu
- Location: Tucson, AZ
  Founded: 1885
  Institutional Type: Land Grant Research University
  Carnegie Foundation Classification: Research University, Very High Research Activity
- Number of Students (FTE): 30,665 undergraduates; 8,571 graduate/professional students
- Number of Faculty: 2,418
- Degree Programs: 119 bachelor’s programs, 127 master’s programs, 92 doctoral programs.
- Founding of the Undergraduate Biology Research Program: 1988
UBRP Org Chart

College of Medicine
College of Pharmacy
College of Public Health
College of Nursing

College of Engineering
College of Agriculture
College of Science
College of Optical Science

NuvoGen Research, LLC

Arid-Land Agricultural Research Center

Barrow Neurological Institute

Other Affiliates
UBRP: Key Programs

- Undergraduate Biology Research Program (UBRP)
- Beckman Scholars Program
- American Society for Pharmacology & Experimental Therapeutics SURF Program (ASPET/SURF)
- Biomedical Research Abroad: Vistas Open! (BRAVO!)
- Pen Pals Program
UBRP: Lesson Learned

Expanding undergraduate research to include international placements is doable and well worth the effort because it:

- Facilitates students’ development of a global view
- Increases students’ confidence
- Contributes to the fund of new knowledge
University of Delaware

- Website: www.urel.udel.edu
- Location: Newark, DE (additional campus locations in Wilmington, Dover, Georgetown, and Lewes)
- Founded: 1743
- Institutional Type: Land Grant, Sea Grant and Space Grant institution.
- Carnegie Foundation Classification: Research University with very high research activity

- Number of Students: 17,000 undergraduates, 3,700 graduate students, and 850 students in professional and continuing studies
- Number of Faculty: 1,126
- Degree Programs: 4 associate programs, 137 bachelor’s programs, 117 master’s programs, 50 doctoral programs.

- Founding of UR Office: 1980
Delaware Org Chart

Associate Provost
Academic Affairs

Faculty Director
Undergraduate
Research &
Experiential
Learning

Administrative
Assistant

Undergraduate Research Program
FTE = 3

Office of Service Learning
FTE = 1

McNair Scholars Program
FTE = 2

ArtsBridge Scholars Program
Delaware: Key Programs

- Office of Undergraduate Research and Experiential Learning
- Undergraduate Research Program (URP)
- Office of Service Learning (OSL)
- ArtsBridge America Scholars Program
- McNair Scholars Program
- Alliance of Summer Scholar Programs
Delaware: Lessons Learned

Alliance Building: A best practice for successful UR

- Sustains information sharing
- Trims duplicated services that drain resources
- Encourages student engagement in research
- Improves diverse student participation in UR
University of Washington

- Website: [www.washington.edu/research/urp/](http://www.washington.edu/research/urp/)
- Location: Seattle (main), Bothell, and Tacoma, WA
- Founded: 1861
- Carnegie classification: Research University, Very high research activity
- Students: 48,022; 34,523 undergraduates; 13,499 graduate & professional
- Campus-wide Undergraduate Research Program established 1999
University of Washington
Partial Organizational Chart

Joint UAA/OMA&D Center for Experiential Learning and Diversity
UW: Key Programs

- Annual Undergraduate Research Symposium (1,000 presenters in 2012)
- *Research Exposed: Approaches to Inquiry*, Introductory Course
- Undergraduate Research Opportunities Database, Advising, Workshops
- Mary Gates Endowment for Students Research Scholarships – all fields, $20m endowed fund
- Summer Institute in Arts and Humanities – partnership with Simpson Center for the Humanities
- Amgen Scholars Summer Research Program
- Levinson Emerging Scholars; Washington Research Foundation Fellowships for Advanced Undergraduate Researchers
- Undergraduate Research Leaders
UW: Lesson Learned

- Annual Undergraduate Research Symposium is more than a one-day event:
  - Make it a signature campus event, including president, provost, regents, alumni, community;
  - Provide learning opportunities for students each step of the way with workshops, help sessions, online tools;
  - Collaborate with faculty and advisers to promote participation and attendance;
  - Use the event and publications as advising tools for students starting to think about getting involved;
  - Capitalize on volunteers to staff all aspects of event;
  - Recognize and celebrate faculty mentoring, staff effort at the event.
University of Missouri

- Website: undergradresearch.missouri.edu
- Location: Columbia, MO
- Founded: 1839
- State Flagship Research University, Land Grant University, Very High Research Activity, AAU member
- Medicine, Vet Med, Agriculture, Engineering, Law, Business, Education, Journalism, Nursing, Arts & Sciences
- Students: 33,805; 26,024 undergraduates; 7,781 graduate & professional
- Campus-wide Undergraduate Research Office established 2003
MU: Key Programs

- Undergraduate Research & Creative Achievements Forum: Spring (~250) and Summer (~125)

- Undergraduate Research Ambassadors

- Travel Awards to Undergraduates

- Monthly Newsletter to campus community, students

- Administer Life Sciences Undergraduate Research Opportunity Program (LS UROP) for MU students

- Active Summer Program: 2 NSF-REUs, NIH, NSF, USDA, HHMI, University Funding: 45 visiting students and 54 MU students

- Administer NIGMS undergraduate minority research program for 80-100 students, with 8 peer mentors
MU: Lesson Learned

- Undergraduate and Graduate Student assistants are good additions to the office staff, TO A POINT:
  - Skilled and enthusiastic undergraduates are great for support work of the office
  - Undergraduate Journalism Major actually works out better than a Graduate Student for newsletters, PR, graphic design, web updates
  - Graduate students (in education) can supplement full-time staff; however....
  - Turn over of graduate students every one-two years forces retraining/relearning of new member of the team.
  - For long-term sustainability (and growth), we have been lobbying for another full-time staff member for 3 years now.
  - Don’t underestimate planning ahead to grow your staff as the programs grow!
Utah State University

- Website: [www.usu.edu](http://www.usu.edu)
- Location: Logan, UT (regional campus locations in Brigham City, Uintah Basin, Tooele, Price, San Juan)
- Founded: 1888
- Institutional Type: Land Grant, Space Grant research university
  Carnegie Classification: Research university with high research activity
- Number of Students (FTE): 15,043 undergraduates, 1,814 graduate students
  Number of Faculty: 880
- Degree Programs: 4 associate programs, 168 bachelor’s programs, 96 master’s programs, 38 doctoral programs.
- Founding of UR Office: 1975
Utah State Org Chart

Office of Research and Graduate Studies
Mark McLaflan (VP for Research and Dean of the School of Graduate Studies)
Jeff Broadbent (Assoc. VP & Assoc. Dean)
Shelley Lindauer (Assoc. VP & Assoc. Dean)

Graduate Council

Research Council

USU Research Foundation

Administrative Staff
Teresa Seeholzer (Asst. to the VP & Dean)
D.D. Leonard (Asst. to the VP and Dean)
Sharece Cox (Staff Assistant)

Professional Staff
Lorraine Walker (Senior Business Officer)
Anna McEntire (Director of Communications)

Academic Departments

Expand success of USU’s graduate students.

Increase competitiveness in USU research contracts/grants.

Increase individual researcher capacity and productivity.

Enhance graduate and undergraduate research program.

School of Graduate Studies
Steven Beck (Asst. Dean)

Sponsored Programs
Jeff Coleman (Director)

Environmental Health & Safety
Steve Bilbao (Director)

Integrity and Compliance
Russ Price (Manager)

Grad & Undergrad Research
Scott Bates (Assoc. VP)

Proposal Development
Lori Hansen (Manager)

Institutional Review Board
True Rubal (Administrator)

High Performance Computing
Eric Held (Chair)

EPSCoR
Rita Teufelico (Lead Coordinator)

Animal Care & Use
LARC/IACUC
Aaron Olsen (Director)
Utah State: Key Programs

- Research Fellows (UR for entering students)
- Undergraduate Research & Creative Opportunities Grants (URCO) – started in 1975
- Arts & Humanities Faculty Grants for UR Assistants
- Undergraduate Research at State Capitol
- Utah Conference of Undergraduate Research (UCUR)
- Partnership with Student Government (ASUSU)
Utah State: Lesson Learned

- Importance of an advisory board—faculty, librarians, Honors, & students—to
  - Share ownership of undergraduate research on campus;
  - Establish priorities;
  - Evaluate UR awards;
  - Partake in fund-raising.
Questions?
Comments?

Find a copy of this presentation on the URPD Division website of CUR:
http://cur.networkats.com/members_online/members/divisions.asp?div=0010