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This standard and all other standards are available along with information on self-assessment procedures in the most recent edition of the *CAS Professional Standards for Higher Education* book. You are particularly encouraged to examine the learning and developmental outcomes (see [www.cas.edu](http://www.cas.edu) and in the standards book) in the design and assessment of your programs.

This standard has a Self-Assessment Guide (SAG) available for purchase from [www.cas.edu](http://www.cas.edu) for use in program evaluation.

### **CAS MISSION STATEMENT**

CAS, a consortium of professional associations in higher education, promotes the use of its professional standards for the development, assessment, and improvement of quality student learning, programs, and services

### **CAS STANDARDS AND GUIDELINES**

Each CAS standard contains 12 common criteria categories (referred to as “general standards”) that have relevance for each and every functional area, no matter what its primary focus. In addition to the general standards, all functional area standards are comprised of both specialty standards and guidelines. All standards use the auxiliary verbs “**must**” and “**shall**” and appear in **bold print** so that users can quickly identify them. Guidelines are designed to provide suggestions and illustrations that can assist in establishing programs and services that more fully address the needs of students than those mandated by a standard. CAS guidelines appear in regular font and use the auxiliary verbs “should” and “may.”

### **OVER THIRTY YEARS OF PROFESSIONAL SERVICES**

The Council for the Advancement of Standards in Higher Education (CAS) has been the pre-eminent force for promoting standards in student affairs, student services, and student development programs since its inception in 1979. For the ultimate purpose of fostering and enhancing student learning, development, and achievement and in general to promote good citizenship, CAS continues to create and deliver a dynamic and credible book of professional standards and guidelines and Self-Assessment Guides that are designed to lead to a host of quality-controlled programs and services. These standards respond to real-time student needs, the requirements of sound pedagogy, and the effective management of 45 functional areas, consistent with institutional missions. Individuals and institutions from more than 40 CAS member organizations comprise a professional constituency of over 100,000 professionals.

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Direct your questions to the CAS Executive Office, P.O. Box 1369, Fort Collins, CO 80522-1369,  
202-862-1400, or email Marybeth Drechsler Sharp, Executive Director ([executive\\_director@cas.edu](mailto:executive_director@cas.edu))

## UNDERGRADUATE RESEARCH PROGRAMS

### CAS Contextual Statement

The history of undergraduate research mirrors the history of higher education itself. Many of the principles found in modern-day undergraduate research reflect features of the tutorial model of education: close academic connections between students and faculty, mentorship and apprenticeship, problem solving, and experiential learning (Lucas, 1994). As colleges and universities have expanded access to higher education, undergraduate research has emerged as a way to continue educational practices of the past in a new educational environment with greater size and scale.

Undergraduate research programs (URP) developed when disciplines, professional organizations, and governmental agencies recognized the value of including undergraduate students in the research enterprise. The National Science Foundation administered a formal program for undergraduate research from 1958 to 1981, and since 1986 NSF has offered support via the Research Experiences for Undergraduates (REU) program (National Science Foundation, n.d.). NSF also created the Research in Undergraduate Institutions (RUI) program to recognize and support faculty-student collaborative research at predominantly undergraduate institutions. Efforts within disciplines to recognize and promote undergraduate research led to the development of two cross-disciplinary national organizations: the Council on Undergraduate Research (CUR) and the National Conferences on Undergraduate Research (NCUR). CUR was formed in 1978 by a group of chemistry professors and now includes individual and institutional members from more than 900 colleges and universities (CUR, n.d.-b). NCUR began in 1987 as an interdisciplinary conference for undergraduate students from across the United States to present their research and scholarship (CUR, n.d.-c), complementing the introduction of undergraduate poster sessions at professional meetings. The two organizations merged in October 2010 (CUR, n.d.-a) to provide comprehensive resources for faculty, students, and administrators.

URP vary in their location within an institution (e.g., reporting to a provost, lead research administrator, or dean), as well as in their own organizational structure (led by a full-time or part-time faculty or professional staff member, often supported by other professional and/or student staff). Kinkead and Blockus (2012) delineate common elements of URP and provide examples to illustrate variation across institutions. The range of possible models signals the importance of tailoring URP to the mission, core values, needs, and resources of the institutions they serve.

As URP have evolved, basic tenets have emerged that are shared regardless of academic discipline or institution type. First, research is broadly defined so that it encompasses all types of scholarly and creative activities at an institution. CUR defines undergraduate research as “an inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline or area of study” (n.d.-b). This underscores the idea that students are contributing meaningful work to a discipline rather than participating in a simulation exercise divorced from authentic research. Undergraduate research is genuine participation in the activity of a discipline. Students learn the processes, habits of mind, and principles of scholarship used by faculty researchers and professional scholars through active participation in original inquiry. The contributions made by undergraduates can be seen in the papers and other works that they publish, the creative work they perform and exhibit, and the presentations they make at meetings and conferences.

Undergraduate research has also been identified as a high-impact practice for student learning and development, indicating the important role undergraduate research can play in the college experience (Kuh, 2008). Collaborative research with faculty allows for extended interaction, frequent feedback about performance, and opportunities to synthesize and apply learning, all of which support student engagement and, thereby, persistence and retention. Undergraduate researchers develop and refine aspirations for graduate education and deepen their understanding of research methods and procedures. Students also report that undergraduate research fosters the development of broadly applicable academic, personal, and career skills, such as critical thinking, communication, collaboration, and problem solving. See Laursen et al. (2010) for a review of research on student outcomes and a detailed analysis of students’ gains from participating in intensive summer research experiences in the sciences.

Undergraduate research, once limited to senior theses or summer opportunities for rising seniors, has become a successful strategy across the undergraduate curriculum. Institutions now use URP as connection opportunities engaging students in and out of the classroom. While many undergraduate research opportunities have been offered in national labs, industrial labs, and research universities, undergraduate research is equally available in four-year colleges and increasingly in community colleges. In addition to student-industry, student-community, and student-

faculty collaborative research in areas of faculty interest and specialty, URP foster other categories of undergraduate research, including independent research by students, collaborative work among students, and student-mentor collaborative research outside the research interests of the mentor.

In 2014, CUR adopted five strategic pillars that support URP and structure program development:

#### 1. Integrating and Building Undergraduate Research into Curriculum and Coursework

As colleges and universities strive to involve more students in high-impact educational practices such as undergraduate research, they may encounter challenges relating to scale and capacity. Curriculum and coursework represent promising avenues for involving more students in research experiences through such approaches as problem-based learning or extended, collaborative projects within learning community contexts. Refer to Karukstis and Elgren (2007) for a discussion of curricular elements and structures, as well as institutional practices, which contribute to a “research-supportive” curriculum.

#### 2. Assessment of the Impact of Undergraduate Research

The *CAS Standards and Guidelines for Undergraduate Research Programs* include a section on assessment and evaluation in recognition of the importance of assessing achievement of undergraduate research program goals and intended learning outcomes for students. Assessment will have primary implications in the local context, suggesting ways of improving programs and services, but institutional assessment efforts can benefit from—and, in turn, can inform—developments in undergraduate research. Established instruments—such as the Undergraduate Research Student Self-Assessment (URSSA; Hunter, Weston, Laursen, & Thiry, 2009), the Survey of Undergraduate Research Experiences (SURE; Lopatto, 2004), and SUNY-Buffalo State’s Longitudinal Student Outcomes Evaluation (Singer & Zimmerman, 2012)—provide mechanisms for collecting data across programs and time points which can be usefully combined with other approaches, such as interviews and focus groups. See Laursen (2015) for a review of current assessment studies and suggestions for future directions in program evaluation.

#### 3. Diversity and Inclusion in Undergraduate Research

Diversity and inclusion, as reflected in the *CAS* standards for diversity, equity, and access, are critical issues in undergraduate research. A growing body of research documents efforts to expand participation among students from underrepresented groups, from different types of institutions, at early stages of their academic careers, and across the full range of academic disciplines (Boyd & Wesemann, 2009). Such initiatives are of critical importance in engaging students of diverse backgrounds in academic inquiry, which can influence the shape and content of that inquiry as well as the paths pursued by those students in college and beyond.

#### 4. Innovation and Collaboration in Undergraduate Research

Collaboration in undergraduate research can take many forms, such as working as part of an interdisciplinary team or contributing to a cross-institutional research collaboration. Institutions are now experimenting with other collaborative models, exploring partnerships with businesses and nonprofit organizations to design research projects related to real-world needs. These efforts may be supported by intra-institutional partnerships with service learning, extension services, or other allied units. Related to this trend is the growing emphasis on entrepreneurship and innovation at postsecondary institutions, as evidenced by the development of makerspaces, business incubators, and entrepreneurship centers. Entrepreneurship experiences share many elements in common with undergraduate research – hands-on work on a project with no predetermined outcome, often in collaboration with team members – and may represent new opportunities for executing or applying research.

#### 5. Internationalization and Undergraduate Research

International research exchanges and collaborations are concrete illustrations of the global nature of contemporary research. International fieldwork experiences can benefit undergraduate research in a variety of fields, from conservation biology to linguistics, anthropology to civil engineering. Logistical challenges associated with international work may be addressed most effectively through collaboration with other campus offices with expertise in study abroad, travel, and international affairs. The internationalization of undergraduate research enhances students’ global learning, appreciation of diversity, and engagement with the difficult problems and questions that transcend borders.

Adopting the priorities identified by CUR's five pillars and the "Standards and Guidelines for Undergraduate Research Programs" developed by CAS will result in a more consistent and intentional approach to implementing URP across different institutional contexts. As with all programs, developing and implementing processes to assess the effectiveness and quality of undergraduate research programs is vital: do we know that our efforts to engage students in these endeavors is having the positive influence we intend? The standards that follow are an excellent starting point for developing new URP and assessing existing programs.

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### Contextual Statement Contributors

#### Current Edition:

Neal Abraham, Five Colleges, Inc.  
Eugene Alpert, The Washington Center  
Elizabeth Ambos, Council on Undergraduate Research  
John Augusto, University of Kansas  
Anne Boettcher, Embry-Riddle Aeronautical University  
Julie Morris, University of South Carolina  
Roger Rowlett, Colgate University  
Jenny Shanahan, Bridgewater State University  
Bethany Usher, George Mason University

#### Previous Editions:

Dorothy Mitstifer, ACHS  
Caroline E. McGuire, University of Connecticut  
Jennifer Lease Butts, University of Connecticut

## UNDERGRADUATE RESEARCH PROGRAMS

### CAS Standards and Guidelines

#### Part 1. MISSION

The mission of Undergraduate Research Programs (URP) must be to engage students in mentored investigative and creative activity to experience firsthand the processes of scholarly exploration and discovery.

URP must provide opportunities for undergraduate students to conduct an inquiry and investigation that makes an original intellectual or creative contribution to the discipline.

URP must develop, disseminate, implement, and regularly review their missions, which must be consistent with the mission of the institution and with applicable professional standards. The mission must be appropriate for the institution's students and other constituents. Mission statements must reference student learning and development.

#### Part 2. PROGRAM

To achieve their mission, Undergraduate Research Programs (URP) must contribute to

- students' formal education, which includes both the curriculum and the co-curriculum
- student progression and timely completion of educational goals
- preparation of students for their careers, citizenship, and lives
- student learning and development

To contribute to student learning and development, URP must

- identify relevant and desirable student learning and development outcomes
- articulate how the student learning and development outcomes align with the six CAS student learning and development domains and related dimensions
- assess relevant and desirable student learning and development
- provide evidence of impact on outcomes
- articulate contributions to or support of student learning and development in the domains not specifically assessed
- use evidence gathered to create strategies for improvement of programs and services

#### STUDENT LEARNING AND DEVELOPMENT DOMAINS AND DIMENSIONS

**Domain: knowledge acquisition, integration, construction, and application**

- **Dimensions: understanding knowledge from a range of disciplines; connecting knowledge to other knowledge, ideas, and experiences; constructing knowledge; and relating knowledge to daily life**

**Domain: cognitive complexity**

- **Dimensions: critical thinking, reflective thinking, effective reasoning, and creativity**

**Domain: intrapersonal development**

- **Dimensions: realistic self-appraisal, self-understanding, and self-respect; identity development; commitment to ethics and integrity; and spiritual awareness**

**Domain: interpersonal competence**

- **Dimensions: meaningful relationships, interdependence, collaboration, and effective leadership**

**Domain: humanitarianism and civic engagement**

- **Dimensions: understanding and appreciation of cultural and human differences, social responsibility, global perspective, and sense of civic responsibility**

**Domain: practical competence**

- **Dimensions: pursuing goals, communicating effectively, technical competence, managing personal affairs, managing career development, demonstrating professionalism, maintaining health and wellness, and living a purposeful and satisfying life**

[LD Outcomes: See *The Council for the Advancement of Standards Learning and Development Outcomes* statement for examples of outcomes related to these domains and dimensions.]

**In their focus on development of knowledge and critical thinking, URP must provide programs, services, and resources to assist students participating in undergraduate research.**

**URP must be**

- **intentionally designed**
- **guided by theories and knowledge of learning and development**
- **integrated into the life of the institution**
- **reflective of developmental and demographic profiles of the student population**
- **responsive to needs of individuals, populations with distinct needs, and relevant constituencies**
- **delivered using multiple formats, strategies, and contexts**
- **designed to provide universal access**

**URP must collaborate with colleagues and departments across the institution to promote student learning and development, persistence, and success.**

**URP must provide opportunities for undergraduate students to conduct an inquiry and investigation that makes an original intellectual or creative contribution to the discipline.**

**URP must**

- **create an active learning environment supportive of scholarship and research**
- **integrate research activities with professional and liberal education**
- **create an infrastructure to recognize and reward research excellence and successful completion of research**
- **create a collegial climate in which to conduct research**
- **provide a progression of research and research-like experiences to prepare students to undertake undergraduate research**
- **allow students to define and pursue their interests within the context of the research activity**
- **promote intellectual rigor and student intellectual growth and development**
- **require that students submit documentation of their completed work**
- **provide opportunities for research dissemination, including oral and written presentations**

**URP must encourage research that is commensurate with scholarship and practice in the disciplines and enables students to recognize work that is original, current, and significant.**

**URP must provide students with information about diverse types of research across a range of disciplines at the institution.**

Undergraduate research may be performed within various settings and structures. URP should provide a range of options so that all students may find appropriate opportunities. Activities may be initiated by students, faculty members, programs, or institutions. Examples of such opportunities may include first-year experiences, living-learning programs, honors programs, graduation requirements, education abroad, general education courses, major requirements, capstone courses, internships, service learning, and community-based research.

**URP must provide support and professional development for faculty and staff who mentor undergraduate research.**

**URP must regularly establish mechanisms for individual or small-group mentoring (curricular and/or extracurricular) based on the intellectual readiness of students. Mentoring must address research design; appropriate forms of data collection, verification, and analysis; information retrieval; all pertinent domains of responsible conduct of research, including oversight of research on human subjects; and appropriate forms of written and oral scholarly communication.**

**URP must ensure students are made aware of discipline- and publication-specific authorship policies and ethical standards. Students must be provided resources to identify those relevant to their research and its responsible conduct.**

**URP must provide opportunities for undergraduate students to present their research to peers, faculty members, professionals, and appropriate others.**

URP should encourage attendance at undergraduate and disciplinary research conferences. These may include institutional, local, regional, national, and international meetings.

URP should offer opportunities for academic credit for research activity where applicable, feasible, and appropriate.

URP should offer a range of research experiences appropriate for students at various developmental levels and abilities.

### **Part 3. ORGANIZATION AND LEADERSHIP**

**To achieve program and student learning and development outcomes, Undergraduate Research Programs (URP) must be purposefully structured for effectiveness. URP must have clearly stated and current**

- **goals and outcomes**
- **policies and procedures**
- **responsibilities and performance expectations for personnel**
- **organizational charts demonstrating clear channels of authority**

**URP must confer and collaborate with other administrative units in the institution.**

URP may collaborate with such offices as research and sponsored programs, provosts, academic deans, department chairs, academic advisors, honors programs, scholarship/fellowship advisors, faculty professional development coordinators, career services, student affairs, and offices that work with underrepresented populations.

**Leaders must model ethical behavior and institutional citizenship.**

**Leaders with organizational authority for URP must provide strategic planning, management and supervision, and program advancement.**

**Strategic Planning**

- articulate a vision and mission that drive short- and long-term planning
- set goals and objectives based on the needs of the populations served, intended student learning and development outcomes, and program outcomes
- facilitate continuous development, implementation, and assessment of program effectiveness and goal attainment congruent with institutional mission and strategic plans
- promote environments that provide opportunities for student learning, development, and engagement
- develop, adapt, and improve programs and services in response to the changing needs of populations served and evolving institutional priorities
- include diverse perspectives to inform decision making

**Management and Supervision**

- plan, allocate, and monitor the use of fiscal, physical, human, intellectual, and technological resources
- manage human resource processes including recruitment, selection, professional development, supervision, performance planning, succession planning, evaluation, recognition, and reward
- influence others to contribute to the effectiveness and success of the unit
- empower professional, support, and student personnel to become effective leaders
- encourage and support collaboration with colleagues and departments across the institution
- encourage and support scholarly contributions to the profession
- identify and address individual, organizational, and environmental conditions that foster or inhibit mission achievement
- use current and valid evidence to inform decisions
- incorporate sustainability practices in the management and design of programs, services, and facilities
- understand appropriate technologies and integrate them into programs and services
- be knowledgeable about codes and laws relevant to programs and services and ensure that programs and services meet those requirements
- assess and take action to mitigate potential risks

**Program Advancement**

- advocate for and actively promote the mission and goals of the programs and services
- inform stakeholders about issues affecting practice
- facilitate processes to reach consensus where wide support is needed
- advocate for representation in strategic planning initiatives at divisional and institutional levels

**Part 4. HUMAN RESOURCES**

**Undergraduate Research Programs (URP) must be staffed adequately by individuals qualified to accomplish mission and goals.**

**URP must have access to technical and support personnel adequate to accomplish their mission.**

**Within institutional guidelines, URP must**

- establish procedures for personnel recruitment and selection, training, performance planning, and evaluation

- **set expectations for supervision and performance**
- **provide personnel access to continuing and advanced education and appropriate professional development opportunities to improve their competence, skills, and leadership capacity**
- **consider work/life options available to personnel (e.g., compressed work schedules, flextime, job sharing, remote work, or telework) to promote recruitment and retention of personnel**

**Within institutional guidelines, URP must have policies and procedures that reward and incentivize participation of faculty, staff, and students.**

Incentives for faculty and staff may include reduced loads, stipends, priority consideration for upcoming grants, travel and research resources, and additional consideration for promotion, tenure, and merit pay.

Incentives for students may include special notation on official transcripts, travel and research funding, stipends, recognition, awards, and reduced charges for research courses.

The institution may also revise intellectual property policies to give faculty, staff, or students some claim to copyright or patent rights.

**Administrators of URP must**

- **ensure that all personnel have updated position descriptions**
- **implement recruitment and selection/hiring strategies that produce a workforce inclusive of underrepresented populations**
- **develop promotion practices that are fair, inclusive, proactive, and non-discriminatory**

**Personnel responsible for delivery of URP must have written performance goals, objectives, and outcomes for each year's performance cycle to be used to plan, review, and evaluate work and performance. The performance plan must be updated regularly to reflect changes during the performance cycle.**

**Results of individual personnel evaluations must be used to recognize personnel performance, address performance issues, implement individual and/or collective personnel development and training programs, and inform the assessment of programs and services.**

**URP personnel, when hired and throughout their employment, must receive appropriate and thorough training.**

**URP personnel, including student employees and volunteers, must have access to resources or receive specific training on**

- **institutional policies pertaining to functions or activities they support**
- **privacy and confidentiality policies**
- **laws regarding access to student records**
- **policies and procedures for dealing with sensitive institutional information**
- **policies and procedures related to technology used to store or access student records and institutional data**
- **how and when to refer those in need of additional assistance to qualified personnel and have access to a supervisor for assistance in making these judgments**
- **systems and technologies necessary to perform their assigned responsibilities**
- **ethical and legal uses of technology**

**URP personnel must receive specific training on requirements of responsible conduct of research.**

**URP personnel must engage in continuing professional development activities to keep abreast of the research, theories, legislation, policies, and developments that affect their programs and services.**

URP personnel should advocate for institutional support of these professional development activities.

**URP must offer training for individuals who mentor undergraduate researchers. Training must include research policies and procedures and URP goals and opportunities.**

The professional development of staff and faculty members engaged in URP should address

- identification of the compatibility between research activities and student interests
- establishment and maintenance of relationships with academic and other units on campus
- development, implementation, and assessment of learning goals
- preparation, mentoring, and monitoring of diverse students involved in research experiences
- use of discovery-based strategies that support independent inquiry and lead to undergraduate research
- education and support of students to apply learning from research experiences to future endeavors

**Administrators of URP must ensure that personnel are knowledgeable about and trained in safety, emergency procedures, and crisis prevention and response. Risk management efforts must address identification of threatening conduct or behavior and must incorporate a system for responding to and reporting such behaviors.**

**URP personnel must be knowledgeable of and trained in safety and emergency procedures for securing and vacating facilities.**

## **PROFESSIONAL PERSONNEL**

**URP professional personnel either must hold an earned graduate or professional degree in a field relevant to their position or must possess an appropriate combination of educational credentials and related work experience.**

## **INTERNS OR GRADUATE ASSISTANTS**

**Degree- or credential-seeking interns or graduate assistants must be qualified by enrollment in an appropriate field of study and relevant experience. These students must be trained and supervised by professional personnel who possess applicable educational credentials and work experience and have supervisory experience. Supervisors must be cognizant of the dual roles interns and graduate assistants have as both student and employee.**

**Supervisors must**

- adhere to parameters of students' job descriptions
- articulate intended learning outcomes in student job descriptions
- adhere to agreed-upon work hours and schedules
- offer flexible scheduling when circumstances necessitate

**Supervisors and students must both agree to suitable compensation if circumstances necessitate additional hours.**

## **STUDENT EMPLOYEES AND VOLUNTEERS**

**Student employees and volunteers must be carefully selected, trained, supervised, and evaluated. Students must have access to a supervisor. Student employees and volunteers must be provided clear job descriptions, pre-service training based on assessed needs, and continuing development.**

## **Part 5. ETHICS**

**Undergraduate Research Programs (URP) must**

- review applicable professional ethical standards and must adopt or develop and implement appropriate statements of ethical practice
- publish and adhere to statements of ethical practice and ensure their periodic review
- orient new personnel to relevant ethical standards and statements of ethical practice and related institutional policies

**Statements of ethical standards must**

- specify that URP personnel respect privacy and maintain confidentiality in communications and records as delineated by privacy laws
- specify limits on disclosure of information contained in students' records as well as requirements to disclose to appropriate authorities
- address conflicts of interest, or appearance thereof, by personnel in the performance of their work
- reflect the responsibility of personnel to be fair, objective, and impartial in their interactions with others
- reference management of institutional funds
- reference appropriate behavior regarding research and assessment with human participants, confidentiality of research and assessment data, and students' rights and responsibilities
- include the expectation that personnel confront and hold accountable other personnel who exhibit unethical behavior
- address issues surrounding scholarly integrity

**URP must give specific instruction in policies and procedures that guard against potential harm to subjects of research and they must have mechanisms in place to ensure that all those involved follow those policies and procedures.**

**URP must identify and work closely with any offices that coordinate research to ensure that URP research activities meet all ethical standards.**

**URP personnel must**

- employ ethical decision making in the performance of their duties
- inform users of programs and services of ethical obligations and limitations emanating from codes and laws or from licensure requirements
- recognize and avoid conflicts of interest that could adversely influence their judgment or objectivity and, when unavoidable, recuse themselves from the situation
- perform their duties within the scope of their position, training, expertise, and competence
- make referrals when issues presented exceed the scope of the position

**URP personnel must acknowledge contributions meriting authorship or co-authorship based on disciplinary guidelines and practices.**

## **Part 6. LAW, POLICY, AND GOVERNANCE**

**Undergraduate Research Programs (URP) must be in compliance with laws, regulations, and policies that relate to their respective responsibilities and that pose legal obligations, limitations, risks, and liabilities for the institution as a whole. Examples include constitutional, statutory, regulatory, and case law; relevant law and orders emanating from codes and laws; and the institution's policies.**

**URP must have access to legal advice needed for personnel to carry out their assigned responsibilities.**

**URP must inform personnel, appropriate officials, and users of programs and services about existing and changing legal obligations, risks and liabilities, and limitations.**

**URP must inform personnel about professional liability insurance options and refer them to external sources if the institution does not provide coverage.**

**URP must have written policies and procedures on operations, transactions, or tasks that have legal implications.**

**URP written policies and procedures on intellectual property must be consistent with institutional policy.**

**URP must regularly review policies. The revision and creation of policies must be informed by best practices, available evidence, and policy issues in higher education.**

**URP must have procedures and guidelines consistent with institutional policy for responding to threats, emergencies, and crisis situations. Systems and procedures must be in place to disseminate timely and accurate information to students, other members of the institutional community, and appropriate external organizations during emergency situations.**

**Personnel must neither participate in nor condone any form of harassment or activity that demeans persons or creates an intimidating, hostile, or offensive environment.**

**URP must purchase or obtain permission to use copyrighted materials and instruments. References to copyrighted materials and instruments must include appropriate citations.**

**URP must inform personnel about internal and external governance organizations that affect programs and services.**

## **Part 7. DIVERSITY, EQUITY, AND ACCESS**

**Within the context of each institution's mission and in accordance with institutional policies and applicable codes and laws, Undergraduate Research Programs (URP) must create and maintain educational and work environments that are welcoming, accessible, inclusive, equitable, and free from harassment.**

**URP must not discriminate on the basis of disability; age; race; cultural identity; ethnicity; nationality; family educational history (e.g., first generation to attend college); political affiliation; religious affiliation; sex; sexual orientation; gender identity and expression; marital, social, economic, or veteran status; or any other basis included in institutional policies and codes and laws.**

**URP must**

- **advocate for sensitivity to multicultural and social justice concerns by the institution and its personnel**
- **ensure physical, program, and resource access for all constituents**
- **modify or remove policies, practices, systems, technologies, facilities, and structures that create barriers or produce inequities**
- **ensure that when facilities and structures cannot be modified, they do not impede access to programs, services, and resources**
- **establish goals for diversity, equity, and access**

- **foster communication and practices that enhance understanding of identity, culture, self-expression, and heritage**
- **promote respect for commonalities and differences among people within their historical and cultural contexts**
- **address the characteristics and needs of diverse constituents when establishing and implementing culturally relevant and inclusive programs, services, policies, procedures, and practices**
- **provide personnel with diversity, equity, and access training and hold personnel accountable for applying the training to their work**
- **respond to the needs of all constituents served when establishing hours of operation and developing methods of delivering programs, services, and resources**
- **recognize the needs of distance and online learning students by directly providing or assisting them to gain access to comparable services and resources**

**URP leaders must promote a research environment that recognizes and respects all aspects of diversity. This includes research topics and the recruitment, access, and full participation of diverse students in research activity.**

**URP personnel must actively work with all interested participants to select a research experience suitable to their needs, skills, and interests.**

**URP must provide reasonable accommodations if barriers to full participation are present.**

URP should encourage, support, and promote undergraduate research opportunities that involve a wide range of students in various life circumstances and disciplines.

URP should encourage underrepresented students (e.g., gender, ethnicity, age, disability, marital status, socioeconomic status, academic major, religious affiliation, sexual orientation) circumstances to apply and participate in research experiences.

URP should actively encourage and recruit participation from departments and disciplines underrepresented in undergraduate research experiences.

## **Part 8. INSTITUTIONAL AND EXTERNAL RELATIONS**

**Undergraduate Research Programs (URP) must reach out to individuals, groups, communities, and organizations internal and external to the institution to**

- **establish, maintain, and promote understanding and effective relations with those that have a significant interest in or potential effect on the students or other constituents served by the programs and services**
- **garner support and resources for programs and services as defined by the mission**
- **collaborate in offering or improving programs and services to meet the needs of students and other constituents and to achieve program and student outcomes**
- **engage diverse individuals, groups, communities, and organizations to enrich the educational environment and experiences of students and other constituents**
- **disseminate information about the programs and services**

**URP must establish internal and external relationships to**

- **sustain existing programs and establish new opportunities that increase the diversity of options for students as well as promote and support diverse student participation**
- **suggest possible opportunities or present and encourage discussions about student research**

URP should collaborate with appropriate offices to attract and serve underrepresented students.

**Promotional and descriptive information must be accurate and free of deception and misrepresentation.**

**URP must have procedures and guidelines consistent with institutional policy for**

- **communicating with the media**
- **distributing information through print, broadcast, and online sources**
- **contracting with external organizations for delivery of programs and services**
- **cultivating, soliciting, and managing gifts**
- **applying to and managing funds from grants**

## **Part 9. FINANCIAL RESOURCES**

**Undergraduate Research Programs (URP) must have funding to accomplish the mission and goals.**

**URP funding must include support and incentives for participation by faculty, staff, and students.**

Financial incentives for faculty and staff may include stipends, travel and research resources, and additional consideration for merit pay.

Financial incentives for students may include travel and research funding, stipends, and reduced fees for research courses.

**In establishing and prioritizing funding resources, URP must conduct comprehensive analyses to determine**

- **unmet needs of the unit**
- **relevant expenditures**
- **external and internal resources**
- **impact on students and the institution**

URP should seek funding from internal and external sources to increase undergraduate research activities that involve a wide range of students and disciplines.

**URP must use the budget as a planning tool to reflect commitment to the mission and goals of the programs and services and of the institution.**

**URP must administer funds in accordance with established institutional accounting procedures.**

**URP must demonstrate efficient and effective use and responsible stewardship of fiscal resources consistent with institutional protocols.**

**Financial reports must provide an accurate financial overview of the organization and provide clear, understandable, and timely data upon which personnel can plan and make informed decisions.**

**Procurement procedures must**

- **be consistent with institutional policies**
- **ensure that purchases comply with laws and codes for usability and access**
- **ensure that the institution receives value for the funds spent**
- **consider information available for comparing the ethical and environmental impact of products and services purchased**

## **Part 10. TECHNOLOGY**

**Undergraduate Research Programs (URP) must have technology to support the achievement of their mission and goals. The technology and its use must comply with institutional policies and procedures and with relevant codes and laws.**

**URP must use technologies to**

- **provide updated information regarding mission, location, staffing, programs, services, and official contacts to students and other constituents in accessible formats**
- **provide an avenue for students and other constituents to communicate sensitive information in a secure format**
- **enhance the delivery of programs and services for all students**

**URP must**

- **back up data on a regular basis**
- **adhere to institutional policies regarding ethical and legal use of technology**
- **articulate policies and procedures for protecting the confidentiality and security of information**
- **implement a replacement plan and cycle for all technology with attention to sustainability**
- **incorporate accessibility features into technology-based programs and services**

**When providing student access to technology, URP must**

- **have policies on the use of technology that are clear, easy to understand, and available to all students**
- **provide information or referral to support services for those needing assistance in accessing or using technology**
- **provide instruction or training on how to use the technology**
- **inform students of implications of misuse of technologies**

## **Part 11. FACILITIES AND EQUIPMENT**

**Undergraduate Research Programs' (URP) facilities must be intentionally designed and located in suitable, accessible, and safe spaces that demonstrate universal design and support the program's mission and goals.**

URP should have access to ancillary research resources, such as those provided by computational facilities, library and museum collections, and digital archives.

**Facilities must be designed to engage various constituents and promote learning.**

**Personnel must have workspaces that are suitably located and accessible, well equipped, adequate in size, and designed to support their work and responsibilities.**

**The design of the facilities must guarantee the security and privacy of records and ensure the confidentiality of sensitive information and conversations. Personnel must be able to secure their work.**

**URP must incorporate sustainable practices in use of facilities and purchase of equipment. Facilities and equipment must be evaluated on an established cycle and be in compliance with codes, laws, and accepted practices for access, health, safety, and security.**

**When acquiring capital equipment, URP must take into account expenses related to regular maintenance and life cycle costs.**

## **Part 12. ASSESSMENT**

**Undergraduate Research Programs (URP) must develop assessment plans and processes.**

**Assessment plans must articulate an ongoing cycle of assessment activities.**

**URP must identify and assess the student learning and development outcome domains and dimensions relevant to participation in the program.**

**URP must incorporate in assessment the judgments of faculty and staff mentors and reflections of undergraduate student researchers.**

**URP must**

- **specify programmatic goals and intended outcomes**
- **identify student learning and development outcomes**
- **employ multiple measures and methods**
- **develop manageable processes for gathering, interpreting, and evaluating data**
- **document progress toward achievement of goals and outcomes**
- **interpret and use assessment results to demonstrate accountability**
- **report aggregated results to respondent groups and stakeholders**
- **use assessment results to inform planning and decision-making**
- **assess effectiveness of implemented changes**
- **provide evidence of improvement of programs and services**

**URP must employ ethical practices in the assessment process.**

**URP must have access to adequate fiscal, human, professional development, and technological resources to develop and implement assessment plans.**

*General Standards revised in 2014;  
URP content developed/revised in 2007 & 2016*