CAS Self-Assessment Guide

UNDERGRADUATE RESEARCH PROGRAMS

2017

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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

INTRODUCTION AND INSTRUCTIONS
CAS Self-Assessment Guide

The *Self-Assessment Guides* (SAG) translate functional area CAS standards and guidelines into tools for conducting self-study. Educators can use this SAG to gain informed perspectives on the strengths and deficiencies of their programs and services as well as to plan for improvements. Grounded in the reflective, self-regulation approach to quality assurance in higher education endorsed by CAS, this SAG provides institutional, divisional, departmental, and unit leaders with a tool to assess programs and services using currently accepted standards of practice.

The *Introduction* outlines the self-assessment process, describes how to complete a programmatic self-study, and is organized into three sections:
 I.   Self-Assessment Guide Organization and Process
 II. Rating Examples
 III. Formulating an Action Plan, Preparing a Report, and Closing the Loop

The introduction is followed by the *Self-Assessment Worksheet*, which presents the CAS standards for the functional area and incorporates a series of criterion measures for rating purposes.

I. Self-Assessment Guide and Process

CAS developed and has incorporated a number of common criteria that have relevance for each and every functional area, no matter what its primary focus. These common criteria are referred to as "General Standards," which form the core of all functional area standards. CAS standards and guidelines are organized into 12 components, and the SAG workbook corresponds with the same sections:

Part 1. Mission   Part 7. Diversity, Equity, and Access
Part 2. Program   Part 8. Internal and External Relations
Part 3. Organization and Leadership   Part 9. Financial Resources
Part 4. Human Resources   Part 10. Technology
Part 5. Ethics   Part 11. Facilities and Equipment
Part 6. Law, Policy, and Governance   Part 12. Assessment

For each set of standards and guidelines, CAS provides a Self-Assessment Guide (SAG) that includes a recommended comprehensive self-study process for program evaluation. Seven basic steps to using a SAG are suggested for implementing a functional area self-study. The following self-study process is recommended.

1. Plan the Process Map out steps for process, develop timeline, build buy-in with all stakeholders, and explicitly identify desired outcomes of the self-study	5. Develop an Action Plan Identify discrepancies, corrective action, and recommended steps (e.g., identify strengths, weaknesses, recommendations, benchmarks for achievement, resources, timeframe, and responsible individuals)
2. Assemble and Educate the Self-Assessment Team Determine who should be on the team and how to educate the team about the self-study process	6. Prepare a Report Identify audience for report(s); describe the self-study process, evidence gathering, rating process, and evaluations; summarize strengths and weaknesses; describe the action plan; and draft an executive summary
3. Identify, Collect, and Review Evidence Define what constitutes evidence; then gather, collect,	7. Close the Loop Put action plans into practice; work to navigate politics and

manage, and review evidence	secure resources; identify barriers to overcome; and build buy-in to the program review results
4. Conduct and Interpret Ratings Using Evaluative Evidence Clarify team's rating criteria; employ a process for rating [small group, individual, staff]; negotiate rating differences; and manage group ratings	

The first four steps in conducting self-assessment will lead you through planning your process, preparing your team, gathering evidence, and assigning ratings to the criterion measures.

A. Plan the self-study process
B. Assemble and educate self-study team(s)
C. Identify, collect, and review documentary evidence
D. Conduct ratings using evaluative evidence

Step A: Plan the Self-Study Process
Prior to beginning a program review, division and functional area leaders need to determine the area (or areas) to be evaluated and the reasons for the project. This may be dictated by institutional program review cycles or planning for accreditation processes, or it may result from internal divisional goals and needs. Explicitly identifying desired outcomes and key audiences for a self-study will help leaders facilitate a process that makes the most sense for the project.

Critical first phases of a program review include mapping out the planned steps for a program review and developing timelines. Leaders will also want to build buy-in with stakeholders of the functional area. In the initial planning stage of the self-study process it is desirable to involve the full functional area staff, including support staff members, knowledgeable students, and faculty members when feasible. This approach provides opportunity for shared ownership in the evaluation.

Step B: Assemble and Educate the Self-Assessment Review Team
The second step is to identify an individual to coordinate the self-assessment process. CAS recommends that the coordinator be someone other than the leader of the unit under review; this facilitates honest critique by the review team and enhances credibility of the final report. Once a leader is designated, members of the institutional community [e.g., professional staff members, faculty members, students] need to be identified and invited to participate. Whether a sole functional area or a full division is to be reviewed, the self-study team will be strengthened by the inclusion of members from outside the area(s) undergoing review.

In preparing the team for the self-study, it is imperative to train the team on the CAS standards, as well as self-assessment concepts and principles. CAS standards and guidelines are formulated by representatives of 43 higher education professional associations concerned with student learning and development. The CAS standards represent essential practices; the CAS guidelines, on the other hand, are suggestions for practice and serve to elaborate and amplify standards through the use of suggestions, descriptions, and examples. Guidelines can often be employed to enhance program practice. Following a long-standing CAS precedent, the functional area standards and guidelines—presented as an appendix to the self-assessment instrument—are formatted so that standards (i.e., essentials of quality practice) are printed in bold type. Guidelines, which complement the standards, are printed in light-face type. Standards use the auxiliary verbs "must" and "shall" while guidelines use "should" and "may."

In this self-assessment instrument, the CAS standards have been translated into criterion measures and grouped into subcategories for rating purposes. The criterion measures are not designed to focus on discrete ideas; rather, the

measures are designed to capture the major ideas and elements reflected in the standards. For each of the 12 component parts, team members will rate clusters of criterion measures. If the assessment team decides to incorporate one or more of the guidelines into the review process, each guideline can be similarly translated into a measurable statement to facilitate rating.

As a group, the review team should examine the standards carefully and read through the entire self-assessment guide before beginning to assign ratings. It may be desirable for the team, in collaboration with the full staff, to discuss the meaning of each standard. Through this method, differing interpretations can be examined and agreement generally reached about how the standard will be interpreted for purposes of the self-assessment.

Step C: Identify, Collect, and Review Documentary Evidence
Collecting and documenting evidence of program effectiveness is an important step in the assessment process. No self-assessment is complete without relevant data and related documentation being used. It is good practice for programs to collect and file relevant data routinely, which can then be used to document program effectiveness over time. Available documentation should be assembled by the unit under review and provided to the review team at the outset of the study. The team may request additional information as needed as the review is conducted.

Documentary evidence often used to support evaluative judgments includes:
- *Student Recruitment and Marketing Materials*: brochures and other sources of information about the program, participation policies and procedures, and reports about program results and participant evaluations

- *Program Documents:* mission statements, catalogs, brochures and other related materials, staff and student manuals, policy and procedure statements, evaluation and periodic reports, contracts, and staff memos

- *Institutional Administrative Documents*: statements about program purpose and philosophy relative to other educational programs, organizational charts, financial resource statements, student and staff profiles, and assessment reports

- *Research, Assessment, and Evaluation Data*: needs assessments, follow-up studies, program evaluations, outcome measures and methodologies, and previous self-study reports

- *Staff Activity Reports*: annual reports; staff member vitae; service to departments, colleges, university, and other agencies; evidence of effectiveness; scholarship activities, and contributions to the profession

- *Student Activity Reports*: developmental transcripts, portfolios, and other evidence of student contributions to the institution, community, and professional organizations; reports of special student accomplishments; and employer reports on student employment experiences

In the SAG, each section provides recommended evidence and documentation that should be collected and compiled prior to conducting ratings. The evidence collected is likely applicable across numerous sections.

Raters can best make judgments about the program expectations articulated in the standards when they have a variety of evidence available. Multiple forms of evidence should be reviewed and reported in the narrative section of the SAG worksheets. Through the rating process, a self-study team may identify a need to obtain additional information or documentation before proceeding, in order to lend substance to judgments about a given assessment criterion. Evidence and documentation should be appended and referenced in the final self-assessment report.

Step D: Conduct and Interpret Ratings Using Evaluative Evidence
When the program review team has gathered and reviewed necessary evidence, they will be able to assign and interpret ratings to individual criterion measures, following three steps.

1) Rate Criterion Measures
   a) Team members individually rate criterion measures based on their understanding of the evidence.
   b) Team discusses and assigns collective ratings for criterion measures.

2) Provide Narrative Rationale
   a) Document the reasoning and evidence for the rating assigned to each subsection, in the space provided for *Rationale*.
   b) Explain what evidence has been collected and reviewed to support individual and/or team ratings and judgments.
   c) Provide information for follow-up and relevant details about ratings (e.g., if *Partly Meets* is assigned as a rating, what aspects of the program or service do and do not meet which standards statements).

3) Answer Overview Questions (In the Instrument)
   a) Respond, in writing in the space provided, to the *Overview Questions* that immediately follow the rating section of each of the 12 components.
   b) Use answers to the *Overview Questions*, which are designed to stimulate summary thinking about overarching issues, to facilitate interpretation of the ratings and development of the self-study report.

Assessment criterion measures are used to judge how well areas under review meet CAS standards. These criterion measures are designed to be evaluated using a 4-point rating scale. In addition to the numerical rating options, *Does Not Apply* (DNA) and *Insufficient Evidence/Unable to Rate* (IE) ratings are provided. This rating scale is designed to estimate broadly the extent to which a given practice has been performed.

CAS CRITERION MEASURE RATING SCALE

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

Under rare circumstances, it may be determined that a criterion measure used to judge the standard is not applicable for the particular program (e.g., a single sex or other unique institution that cannot meet a criterion measure for that reason). In such instances, raters may use a DNA rating and, in the self-study report, describe their rationale for excluding the practice in the criterion measure. The IE response can be used when relevant data are unavailable to support a judgment. When either the DNA or the IE ratings are used, an explanatory note should be provided in the report. Items rated with 0 should generate careful group consideration and appropriate follow-up action.

Program leaders may wish to incorporate additional criterion measures, such as selected CAS guidelines or other rating scales, into the procedures before the self-assessment process begins. Such practice is encouraged, and the SAG instrument can be amended to incorporate additional criterion measures for judging the program. In such instances, additional pages to accommodate the additional criterion measures may be required.

Whatever procedures are used to arrive at judgments, deliberate discussions should occur about how to initiate the rating process and select the optimal rating strategy. In such discussions, it is expected that disagreements among team members will occur and that resulting clarifications will inform all participants. It is important that the team achieve consensual resolution of such differences before proceeding with individual ratings.

CAS suggests a two-tiered (individual and group) judgment approach for determining the extent to which the program meets the CAS standard. First, the self-assessment team members (and functional area staff members, if desired) individually should rate the clusters of criterion measures using separate copies of the CAS Self-Assessment Guide. In addition, they will need to document their reasoning and evidence for the rating assigned to each subsection in the space provided for *Rationale*. This individualized rating procedure is then followed by a collective review and analysis of the individual ratings.

The individual ratings should be reviewed, discussed, and translated into a collective rating by the team; then the team is ready to move to the interpretation phase of the self-assessment. Interpretation typically incorporates discussion among team members to assure that all aspects of the program were given fair and impartial consideration prior to a final collective judgment. At this point, persistent disagreements over performance ratings may call for additional data collection.

After the team review is completed, a meeting with relevant administrators, staff members, and student leaders should be scheduled for a general review of the self-assessment results. The next step, including discussion of alternative approaches that might be used to strengthen and enhance the program, is to generate steps and activities to be incorporated into an action plan. This step is best done by the unit staff, informed by the results of the review and, when feasible, in consultation with the review team. The Work Forms will guide this process.

II. Rating Examples

Rating Standard Criterion Measures

All CAS standards, printed in bold type, are viewed as being essential to a sound and relevant program or service that contributes to student learning and development. Many of the statements contained in CAS standards incorporate multiple criteria that have been grouped for rating purposes. Consequently, raters may need to judge several standards statements through a single criterion measure. Using the "Ethics" standards as an example, the following illustrates how criterion measures are grouped into subcategories for rating.

Part 5. ETHICS

Suggested Evidence and Documentation:
1. Program code or statement of ethics
2. Ethics statements from relevant functional area professional associations
3. Personnel policies, procedures and/or handbook
4. Student code of conduct
5. Operating policies and procedures related to human subjects research (Institutional Review Board, IRB)
6. Minutes from meetings during which staff reviewed and discussed ethics

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

[ ] 5.1 Ethical Standards
- Programs and services review applicable professional ethical standards and adopt or develop and implement appropriate statements of ethical practice.
- Programs and services publish and adhere to statements of ethical practice, ensure their periodic review, and orient new personnel to relevant statements of ethical practice and related institutional policies.

Rationale:

[ ] 5.2 Statement of Ethical Standards
- Statements of ethical standards specify that programs and services personnel respect privacy and maintain confidentiality in communications and records as delineated by privacy laws.

Using Guidelines to Make Judgments about the Program

As discussed above, program leaders may wish to include selected *CAS Guidelines* to be rated along with the standards. To accomplish this, criterion measure statements must be written for the guidelines selected. The self-study team can readily create statements to be judged as part of the rating process. Programs generally considered in compliance with the standards especially can benefit by using guidelines because guidelines typically call for enhanced program quality.

Not all programs under review will incorporate guidelines to be rated as part of their self-studies. Even though the guidelines are optional for rating purposes, raters are strongly encouraged to read and review them as part of the training process. When *CAS Guidelines* or other criterion measures are rated, they should be treated as if they were standards.

III. Formulating an Action Plan, Preparing a Report, and Closing the Loop

The final three steps in the self-assessment process help a review team and unit plan for and take action using the information garnered through the review of documentary evidence and rating process.

Step E: Formulating an Action Plan

Typically, the assessment process will identify areas where the program is not in compliance with the standards. Action planning designed to overcome program shortcomings and provide program enhancements must then occur. Following is an outline of recommended steps for establishing a comprehensive plan of action using the CAS self-assessment work forms. Space is provided in the SAG for recording relevant information.

1) Resolve Rating Discrepancies (Work Form A)
   a) Identify criterion statements for which there is a substantial rating discrepancy.
   b) Discuss these items and come to a resolution or final decision. Note any measures where consensus could not be reached.

2) Identify Areas of Program Strength (Work Form B)
   a) Identify criterion measure ratings where *strength* in performance or accomplishment was noted (i.e., program exceeds criterion with a rating of 4).

3) Identify Areas for Improvement (Work Form B)
   a) Identify criterion measures where program weaknesses (i.e., program shortcomings that fail to meet criterion measures, and received a rating of 0 or 1) were noted.

4) Recommend Areas for Unit Action (Work Form C)
   a) Note items that need follow-up action for improvement and indicate what requires action.
   b) This is the last form to be completed by the review team.

5) Prepare the Action Plan (Work Form D)
   a) This step should be completed by the unit being reviewed.
   b) Use the items requiring attention listed in Work Form C to formulate a brief action plan. The focus and intended outcomes of the next steps to be taken should be identified.

6) Write Program Action Plan (Work Form E)
   a) List each specific action identified in the self-study that would enhance and strengthen services.
   b) Determine the actions needed to improve for each practice.
   c) Identify responsible parties to complete the action steps.
   d) Set dates by which specific actions are to be completed.

7) Prepare Report
   a) Prepare a comprehensive action plan for implementing program changes.
   b) Identify resources (i.e., human, fiscal, physical) that are essential to program enhancement.
   c) Set tentative start-up date for initiating a subsequent self-study.

Step F: Preparing a Report

To complete the process, a summary document should be produced that (a) explains the mission, purpose, and philosophy of the program; (b) reviews the outcome of the assessment; and (c) recommends specific plans for action.

In addition, depending on the report's audience, describe the process, evidence gathering, ratings, and evaluations, and summarize strengths and weaknesses.

Step G: Closing the Loop
Finally, to close the loop on a program's self-study process, functional area staff members must implement the recommended changes to enhance the quality of their program. In this final step, the staff endeavors to put action plans into practice. In some cases, there will be institutional politics to be navigated; continued support from functional area leaders remains essential. Staff members will want to work collectively to secure resources, identify barriers to implementation, and build stakeholder buy-in to the results. CAS recommends that closing the loop on a self-study process be integrated into regular staff meetings, individual supervision, trainings, and annual reports. A key to successfully using program review in post-secondary student services is weaving the entire process, from planning through taking action, into the fabric of the functional area, departmental, and divisional culture.

UNDERGRADUATE RESEARCH PROGRAMS
CAS Self-Assessment Guide

Part 1: MISSION

Suggested Evidence and Documentation:
1. Current mission statement, brief description of how it was developed, and date of last review
2. Additional goals, values, and statements of purpose
3. Description and copies (if applicable) of where mission statement is disseminated (e.g., included in operating and personnel policies, procedures and/or handbook, hanging in office common space, on website, in strategic plan, and other promotional materials)
4. Institutional/divisional mission statements (e.g., map program mission to broader mission statements)
5. Any additional professional standards aligned with program/service (e.g., standards promoted by functional area organizations)
6. Institutional demographics, description of student population served, and information about community setting

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

1.1 Program Mission and Goals
- The mission of Undergraduate Research Programs (URP) is to engage students in mentored investigative and creative activity to experience firsthand the processes of scholarly exploration and discovery.
- URP provides opportunities for undergraduate students to conduct an inquiry and investigation that makes an original intellectual or creative contribution to the discipline.

Rationale:

1.2 Mission Implementation and Review
- URP develops, disseminates, implements, and regularly reviews its mission.

Rationale:

1.3 Mission Statement
- The mission statement is consistent with that of the institution and with professional standards; is appropriate for student populations and community settings; and references learning and development.

Rationale:

Overview Questions:
1. How does the mission embrace student learning and development?
2. In what ways does the URP mission complement the mission of the institution?
3. To what extent is the mission used to guide practice?

Part 2: PROGRAM

Suggested Evidence and Documentation:
1. Program student learning and development outcomes, and brief description of how they were developed
2. List of current collaborations across the institution that facilitate student learning and development
3. Map of program activities and ways they connect to student learning and development outcomes
4. Map or report of outcome assessment activities, including results
5. Strategic plans program design and enhancement
6. Specifications or requirements (if applicable)

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

2.1 Program Information and Services
- In their focus on development of knowledge and critical thinking, Undergraduate Research Programs (URP) provides programs, services, and resources to assist students participating in undergraduate research.
- URP provides students with information about diverse types of research across a range of disciplines at the institution.
- URP provides opportunities for undergraduate students to conduct an inquiry and investigation that makes an original intellectual or creative contribution to the discipline.
- URP provides opportunities for undergraduate students to present their research to peers, faculty members, professionals, and appropriate others.
- URP creates an infrastructure to recognize and reward research excellence and successful completion of research.

Rationale:

2.2 Research Activity and Dissemination
- URP provides a progression of research and research-like experiences to prepare students to undertake undergraduate research.
- URP allows students to define and pursue their interests within the context of the research activity.
- URP requires that students submit documentation of their completed work.
- URP provides opportunities for research dissemination, including oral and written presentations.

Rationale:

2.3 Program Contribution to Student Learning and Development
- URP contributes to students' formal education (the curriculum and co-curriculum), learning, and development.
- URP contributes to students' progression toward and timely completion of educational goals and preparation for their careers, citizenship, and lives.
- URP identifies relevant and desirable student learning and development outcomes that align with the CAS Learning and Development Outcomes and related domains and dimensions.
- URP promotes intellectual rigor and student intellectual growth and development.

Rationale:

☐ 2.4 Research Education
- URP creates an active learning environment supportive of scholarship and research.
- URP encourages research that is commensurate with scholarship and practice in the disciplines and enables students to recognize work that is original, current, and significant.
- URP ensures that students are made aware of discipline- and publication-specific authorship policies and ethical standards. Students are provided with resources to identify those relevant to their research and its responsible conduct.

Rationale:

☐ 2.5 Assessment of Learning and Development
- URP engages in outcomes assessment, documents evidence of its impact, and articulates the role it plays in student learning and success.
- URP uses evidence to create strategies for improvement of programs.

Rationale:

☐ 2.6 Program Design
- URP bases its work on intentional student learning and development outcomes.
- URP reflects developmental and demographic profiles of the student population and responds to needs of individuals, populations with distinct needs, and relevant constituencies.
- URP is delivered using multiple formats, strategies, and contexts and is designed to provide universal access.
- URP integrates research activities with professional and liberal education.
- URP creates a collegial climate in which to conduct research.

Rationale:

☐ 2.7 Collaboration
- URP collaborates with others across the institution in ways that benefit students.

Rationale:

☐ 2.8 Mentorship
- URP regularly establishes mechanisms for individual or small-group mentoring (curricular and/or extracurricular) based on the intellectual readiness of students.
- Mentoring addresses 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 provides support and professional development for faculty and staff who mentor undergraduate research.

Rationale:

Overview Questions:
1. What are the most significant student learning and development outcomes of URP?
2. What difference does URP make for students who engage with it?
3. What is the demonstrated impact of URP on student learning, development, and success?
4. How has collaboration in program development and delivery affected its impact or outcomes?
5. What changes or adjustments have been made as a result of assessment activities?

Part 3: ORGANIZATION AND LEADERSHIP

Suggested Evidence and Documentation:
1. Program goals and outcomes
2. Operating policies, procedures and/or handbook
3. Personnel and student handbook(s), policies and procedures, and organizational chart(s)
4. Personnel position descriptions, expectations, and performance review templates
5. Periodic reports, contracts, and personnel memos
6. Annual reports by program leaders
7. Program leader resumes, including additional professional involvement
8. Strategic and operating plans
9. Needs assessment of program constituents
10. Report of professional development activities

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

3.1 Organization Documents
- Undergraduate Research Programs (URP) has clearly stated and current goals and outcomes, policies and procedures, descriptions of personnel responsibilities and expectations, and clear organizational charts.

Rationale:

3.2 Actions of Leaders
- Leaders model ethical behavior and institutional citizenship.
- Leaders with organizational authority provide strategic planning, management and supervision, and program advancement.

Rationale:

3.3 Strategic Planning
- URP leaders articulate a vision and mission, as well as set goals and objectives based on the needs of populations served, intended student learning and development outcomes, and program outcomes.
- URP leaders facilitate continuous development, implementation, and assessment of effectiveness and goal attainment congruent with institutional mission and strategic plans.
- URP leaders promote environments that provide meaningful opportunities for student learning, development, and engagement.
- URP leaders develop, adapt, and improve programs and services for populations served and

institutional priorities.
- URP leaders include diverse perspectives to inform decision-making.

Rationale:

☐ 3.4 Management
- URP leaders plan, allocate, and monitor the use of fiscal, physical, human, intellectual, and technological resources.
- URP leaders manage human resource processes including recruitment, selection, performance planning, and succession planning.
- URP leaders use evidence to inform decisions, incorporate sustainability practices, understand and integrate appropriate technologies, and are knowledgeable about relevant codes and laws.
- URP leaders assess and take action to mitigate potential risks.

Rationale:

☐ 3.5 Supervision
- URP leaders manage human resource processes including professional development, supervision, evaluation, recognition, and reward.
- URP leaders empower personnel to become effective leaders and to contribute to the effectiveness and success of the unit.
- URP leaders encourage and support collaboration across the institution and scholarly contributions to the profession.
- URP leaders identify and address individual, organizational, and environmental conditions that foster or inhibit mission achievement.

Rationale:

☐ 3.6 Program Advancement
- URP leaders advocate for and actively promote the mission and goals of the programs and services.
- URP confers and collaborates with other administrative units in the institution.
- URP leaders inform stakeholders about issues affecting practice.
- URP leaders facilitate processes to reach consensus where wide support is needed.
- URP leaders advocate for representation in strategic planning initiatives at divisional and institutional levels.

Rationale:

Overview Questions:
1. Explain the extent to which URP leader(s) are viewed as and held responsible for advancing the departmental mission.
2. Explain the opportunities and limitations present for URP leader(s) as they seek to fulfill the program mission.
3. How do URP leaders advance the organization?
4. How do URP leaders encourage collaboration across the institution?
5. How are URP leaders accountable for their performance?
6. How have URP leaders empowered personnel and engaged stakeholders?

Part 4: HUMAN RESOURCES

Suggested Evidence and Documentation:
1. Program mission, goals, and outcomes
2. Operating policy and procedure manuals/statements for program and institution
3. Organizational chart(s)
4. Personnel handbook, position descriptions (including student employees, volunteers, and graduate students), expectations, and performance review templates
5. Annual reports, including data on student utilization and staff-to-student ratios
6. Association or benchmark reports on operations and staffing
7. Student and staff personnel profiles or resumes, including demographic characteristics, educational background, and previous experience
8. Reports on personnel, including student employees and volunteers, employment experiences
9. Training agendas and schedules
10. Statement of staffing philosophy
11. Professional development activities
12. Minutes from staff meetings at which human resources related standards were discussed and addressed

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

4.1 Adequate Staffing and Support
- Undergraduate Research Programs (URP) is staffed adequately to accomplish mission and goals.
- URP has access to technical and support personnel adequate to accomplish the mission.

Rationale:

4.2 Recruitment, Supervision, and Professional Development
- URP establishes procedures and expectations for personnel recruitment and selection, training, supervision, performance, and evaluation.
- URP provides personnel access to education and professional development opportunities to improve their competence, skills, and leadership capacity.
- URP considers work/life options available to personnel to promote recruitment and retention.
- Within institutional guidelines, URP has policies and procedures that reward and incentivize participation of faculty, staff, and students.

Rationale:

4.3 Employment Practices
- Administrators of URP maintain personnel position descriptions, implement recruitment and hiring strategies that produce an inclusive workforce, and develop promotion practices that are fair, inclusive, proactive, and non-discriminatory.
- Personnel responsible for delivery of programs and services have written performance goals, objectives, and outcomes for each year's performance cycle to be used to plan, review, and evaluate work and performance and update them regularly.
- Results of individual personnel evaluations are 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.

Rationale:

☐ 4.4 Personnel Training
- Personnel, including student employees and volunteers, receive appropriate and thorough training when hired and throughout their employment.
- URP personnel receive specific training on requirements of responsible conduct of research.
- Personnel have access to resources or receive specific training on institutional and governmental policies; procedures and laws pertaining to functions or activities they support; privacy and confidentiality; access to student records; sensitive institutional information; ethical and legal uses of technology; and technology used to store or access student records and institutional data.
- Personnel are trained on how and when to refer those in need of additional assistance to qualified personnel.
- Personnel are trained on systems and technologies necessary to perform their assigned responsibilities.
- Personnel engage in continuing professional development activities to keep abreast of research, theories, legislation, policies, and developments that affect programs and services.
- Administrators ensure that personnel are knowledgeable about and trained in safety, emergency procedures, and crisis prevention and response, including identification of threatening conduct or behavior, and incorporate a system for responding to and reporting such behaviors.
- Personnel are knowledgeable of and trained in safety and emergency procedures for securing and vacating facilities.
- URP offers training for individuals who mentor undergraduate researchers. Training includes research policies and procedures and URP goals and opportunities.

Rationale:

☐ 4.5 Professional Personnel
- Professional personnel either hold an earned graduate or professional degree in a field relevant to their position or possess an appropriate confirmation of educational credentials and related work experience.

Rationale:

☐ 4.6 Interns and Graduate Assistants
- Degree- or credential-seeking interns or graduate assistants are qualified by enrollment in an appropriate field of study and by relevant experience.
- Degree- or credential-seeking interns or graduate assistants are trained and supervised by professional personnel who possess applicable educational credentials and work experience, have supervisory experience and are cognizant of the dual roles of interns and graduate assistants as students and employees.
- Supervisors of interns or graduate assistants adhere to parameters of students' job descriptions, articulate intended learning outcomes in student job descriptions, adhere to agreed-upon work hours and schedules, and offer flexible scheduling when circumstances necessitate.
- Supervisors and students both agree to suitable compensation if circumstances necessitate

additional hours.

Rationale:

4.7 Student Employees and Volunteers
- Student employees and volunteers are carefully selected, trained, supervised, and evaluated; have access to a supervisor; and are provided clear job descriptions, pre-service training based on assessed needs, and continuing development.

Rationale:

Overview Questions:
1. In what ways are personnel qualifications examined, performance evaluated, and personnel recognized for exemplary performance?
2. How are professional development efforts designed, how do they support achievement of the URP mission, and how do they prepare and educate staff on relevant information?
3. How has the staffing model been developed to ensure successful program operations?
4. Describe the URP philosophy toward engaging graduate interns and assistants, and student employees and volunteers in the program human resource pool.

Part 5: ETHICS

Suggested Evidence and Documentation:
1. Program code or statement of ethics
2. Ethics statements from relevant functional area professional associations
3. Personnel policies, procedures and/or handbook
4. Student code of conduct
5. Operating policies and procedures related to human subjects research (Institutional Review Board, IRB)
6. Minutes from meetings during which staff reviewed and discussed ethics

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

5.1 Ethical Standards
- Undergraduate Research Programs (URP) reviews applicable professional ethical standards and adopts or develops and implements appropriate statements of ethical practice.
- URP publishes and adheres to statements of ethical practice, ensures their periodic review, and orients new personnel to relevant statements of ethical practice and related institutional policies.
- URP identifies and works closely with any offices that coordinate research to ensure that URP research activities meet all ethical standards.

Rationale:

5.2 Statement of Ethical Standards
- Statements of ethical standards specify that URP personnel respect privacy and maintain confidentiality in communications and records as delineated by privacy laws.

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

Rationale:

5.3 Ethical Obligations
- URP personnel employ ethical decision making in the performance of their duties.
- URP personnel inform users of programs and services of ethical obligations and limitations emanating from codes and laws or from licensure requirements.
- URP gives specific instruction in policies and procedures that guard against potential harm to subjects of research and they have mechanisms in place to ensure that all those involved follow those policies and procedures.
- URP personnel recognize and avoid conflicts of interest that could adversely influence their judgment or objectivity and, when unavoidable, recuse themselves from the situation.
- URP personnel acknowledge contributions meriting authorship or co-authorship based on disciplinary guidelines and practices.
- URP personnel perform their duties within the scope of their position, training, expertise, and competence and make referrals when issues presented exceed the scope of the position.

Rationale:

Overview Questions:
1. What is the URP strategy for managing student and personnel confidentiality and privacy issues?
2. How are ethical dilemmas and conflicts of interest identified and addressed?
3. How are ethics incorporated into the daily management and decision-making processes of URP?

Part 6: LAW, POLICY, AND GOVERNANCE

Suggested Evidence and Documentation:
1. Emergency procedures
2. Operating policies and procedures
3. Personnel policies, procedures and/or handbook
4. Institutional codes of conduct
5. Contracts
6. Copies of related laws and legal obligations
7. Resources of professional liability insurance

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/	Does Not Meet	Partly Meets	Meets	Exceeds

	Unable to Rate				

☐ 6.1 Legal Obligations and Responsibilities
- Undergraduate Research Programs (URP) is 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.
- URP has access to legal advice needed for personnel to carry out their assigned responsibilities.
- URP informs personnel, appropriate officials, and users of programs and services about existing and changing legal obligations, risks and liabilities, and limitations.
- URP informs personnel about professional liability insurance options and refers them to external sources if the institution does not provide coverage.

Rationale:

☐ 6.2 Policies and Procedures
- URP has written policies and procedures on operations, transactions, or tasks that have legal implications.
- URP written policies and procedures on intellectual property are consistent with institutional policy.
- URP regularly reviews policies that are informed by best practices, available evidence, and policy issues in higher education.
- URP has procedures, systems and guidelines consistent with institutional policy for responding to threats, emergencies, and crisis situations and disseminates timely and accurate information to students, other members of the institutional community, and appropriate external organizations during emergency situations.

Rationale:

☐ 6.3 Harassment and Hostile Environments
- URP personnel neither participate in nor condone any form of harassment or activity that demeans persons or creates an intimidating, hostile, or offensive environment.

Rationale:

☐ 6.4 Copyright Compliance
- URP purchases or obtains permission to use copyrighted materials and instruments and includes appropriate citations on materials and instruments.

Rationale:

☐ 6.5 Governance
- URP informs personnel about internal and external governance organizations that affect programs and services.

Rationale:

Overview Questions:

1. What are the crucial legal, policy and, governance issues faced by URP, and how are they addressed?
2. How are personnel instructed, advised, or assisted with legal, policy, and governance concerns?
3. How are personnel informed about internal and external governance systems?

Part 7: DIVERSITY, EQUITY, AND ACCESS

Suggested Evidence and Documentation:
1. Diversity statements
2. Goals and objectives related to diversity, equity, and access
3. Training plans and agendas for personnel
4. Lists of programs and curriculums related to diversity, equity, and access
5. Personnel policies, procedures, and/or handbook (specifically statements against harassment or discrimination)
6. Facilities audit
7. Assessment results such as participation rates, demographics, campus climate, and student needs

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

7.1 Inclusive Work Environments
- Undergraduate Research Programs (URP) creates and maintains educational work environments that are welcoming, accessible, inclusive, equitable, and free from harassment.
- URP leaders 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 does not discriminate on the basis of ability; age; cultural identity; ethnicity; family educational history; gender identity and expression; nationality; political affiliation; race; religious affiliation; sex; sexual orientation; economic, marital, social, or veteran status; or any other basis included in institutional policies and codes and laws.

Rationale:

7.2 Structural Aspects of Equity, Access, and Inclusion
- URP ensures physical, program, and resource access for all constituents; modifies or removes policies, practices, systems, technologies, facilities, and structures that create barriers or produce inequities; and ensures that when facilities and structures cannot be modified, they do not impede access.
- URP provides reasonable accommodations if barriers to full participation are present.
- URP responds to the needs of all constituents served when establishing hours of operation and developing methods of delivering programs, services, and resources.
- URP recognizes the needs of distance and online learning students by directly providing or assisting them to gain access to comparable services and resources.

Rationale:

7.3 Ensuring Diversity, Equity, and Access
- URP advocates for sensitivity to multicultural and social justice concerns by the institution and its

personnel.
- URP establishes goals for diversity, equity, and access; fosters communication and practices that enhance understanding of identity, culture, self-expression, and heritage; and promotes respect for commonalities and differences among people within their historical and cultural contexts.
- URP addresses the characteristics and needs of diverse constituents when establishing and implementing culturally relevant and inclusive programs, services, policies, procedures, and practices.
- URP personnel actively work with all interested participants to select a research experience suitable to their needs, skills, and interests.
- URP provides personnel with diversity, equity, and access training and holds personnel accountable for applying the training to their work.

Rationale:

Overview Questions:
1. How does URP ensure constituents experience a welcoming, accessible, and inclusive environment that is equitable and free from harassment?
2. How does URP address imbalance in participation among selected populations of students?
3. How does URP address imbalance in staffing patterns among selected populations of program personnel?
4. How does URP ensure cultural competence of its personnel to ensure inclusion in the program?
5. How does URP encourage and provide opportunities for ongoing professional development for its personnel?

Part 8: INTERNAL AND EXTERNAL RELATIONS

Suggested Evidence and Documentation:
1. Promotional material (brochures/sources of information about the program, catalogs, brochures, staff and student handbooks)
2. Media procedures and guidelines
3. List and description of relationships with internal and external partners
4. Minutes from meetings/interactions with key stakeholders

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

8.1 Internal and External Populations
- Undergraduate Research Programs (URP) reaches out to internal and external populations 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.
- URP reaches out to internal and external populations to garner support and resources for programs and services, collaborate in offering or improving programs and services to meet the needs of students and other constituents and to achieve program and student outcomes, and engage diverse individuals, groups, communities, and organizations to enrich the educational environment and experiences of students and other constituents.
- URP establishes internal and external relationships to

- o sustain existing programs and establish new opportunities that increase the diversity of options for students as well as promote and support diverse student participation
- o suggest possible opportunities or present and encourage discussions about student research
- • URP reaches out to internal and external populations to disseminate information about the programs and services.

Rationale:

□ 8.2 Marketing
- • Promotional and descriptive information is accurate and free of deception and misrepresentation.

Rationale:

□ 8.3 Procedures and Guidelines
- • URP has procedures and guidelines consistent with institutional policy to communicate with the media; distribute information through print, broadcast, and online sources; contract with external organizations for delivery of programs and services; cultivate, solicit, and manage gifts; and apply to and manage funds from grants.

Rationale:

Overview Questions:
1. With which relevant individuals, campus offices, and external agencies must URP maintain effective relations? Why are these relationships important, and how are they mutually beneficial?
2. How does URP maintain effective relationships with program constituents?
3. How does URP assess the effectiveness of its relations with individuals, campus offices and external agencies?

Part 9: FINANCIAL RESOURCES

Suggested Evidence and Documentation:
1. Budgets and the budget process
2. Financial statements and audit reports
3. Student fee process and allocation (if applicable)
4. Financial statements for grants, gifts, and other external resources

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

□ 9.1 Adequate Funding
- • Undergraduate Research Programs (URP) has funding to accomplish its mission and goals.
- • URP funding includes support and incentives for participation by faculty, staff, and students.

Rationale:

□ 9.2 Financial Planning and Implementation
- URP conducts a comprehensive analysis to determine unmet needs, relevant expenditures, external and internal resources, and impact on students and the institution.
- URP uses the budget as a planning tool to reflect commitment to the mission and goals of the programs and services and of the institution.
- Financial reports provide an accurate financial overview of the organization and provide clear, understandable, and timely data upon which personnel can plan and make informed decisions.

Rationale:

□ 9.3 Policies, Procedures, and Protocols
- URP administers funds in accordance with established institutional accounting procedures.
- URP demonstrates efficient and effective use and responsible stewardship of fiscal resources consistent with institutional protocols.
- Procurement procedures are consistent with institutional policies, ensure purchases comply with laws and codes for usability and access, ensure the institution receives value for the funds spent, and consider information available for comparing the ethical and environmental impact of products and services purchased.

Rationale:

Overview Questions:
1. What is the funding strategy for URP, and why is this the most appropriate approach?
2. How does URP ensure fiscal responsibility, responsible stewardship, and cost-effectiveness?
3. If applicable, how does URP go about increasing financial resources?

Part 10: TECHNOLOGY

Suggested Evidence and Documentation:
1. Technology policies and procedures
2. Equipment inventory

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

□ 10.1 Current and Adequate Technology
- Undergraduate Research Programs (URP) has adequate technology to support achievement of its mission and goals.
- Use of technology complies with institutional policies and procedures and relevant codes and laws.

Rationale:

□ 10.2 Use of Technology
- URP uses current technology to provide updated information regarding mission, location, staffing, programs, services, and official contacts to students and other constituents in accessible formats.
- URP uses current technology to provide an avenue for students and other constituents to

communicate sensitive information in a secure format, and enhance the delivery of programs and services for all students.

Rationale:

10.3 Data Protection and Upgrades
- URP backs up data on a regular basis.
- URP articulates and adheres to policies and procedures regarding ethical and legal use of technology, as well as for protecting the confidentiality and security of information.
- URP implements a replacement plan and cycle for all technology with attention to sustainability and incorporates accessibility features into technology-based programs and services.

Rationale:

10.4 Student Technology Access
- URP has policies on student use of technology that are clear, easy to understand, and available to all students.
- URP provides information or referral to support services for those needing assistance in accessing or using technology, provides instruction or training on how to use the technology, and informs students of implications of misuse of technologies.

Rationale:

Overview Questions:
1. How is technology inventoried, maintained, and updated?
2. How is information security maintained?
3. How does URP ensure that relevant technology is available for all who are served by the program?
4. How does URP use technology to enhance the delivery of programs, resources, services and overall operations?
5. How does URP utilize technology to foster its learning outcomes?

Part 11: FACILITIES AND EQUIPMENT

Suggested Evidence and Documentation:
1. Equipment inventory
2. Facilities audit and plans for renovations, additions, and enhancements
3. Capital projects, if applicable
4. Structural design or maps to show space allocation
5. Images of the space

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

11.1 Design of Facilities
- Undergraduate Research Programs (URP) facilities are intentionally designed and located in suitable, accessible, and safe spaces that demonstrate universal design and support the URP mission

and goals.
- Facilities are designed to engage various constituents and promote learning.
- The design of the facilities guarantees the security and privacy of records and ensures the confidentiality of sensitive information and conversations.

Rationale:

11.2 Work Space
- Personnel have workspaces that are suitably located and accessible, well equipped, adequate in size, and designed to support their work and responsibilities.
- Personnel are able to secure their work.

Rationale:

11.3 Equipment Acquisition and Facilities Use
- URP incorporates sustainable practices in use of facilities and purchase of equipment.
- Facilities and equipment are evaluated on an established cycle and are in compliance with codes, laws, and accepted practices for access, health, safety, and security.
- When acquiring capital equipment, URP takes into account expenses related to regular maintenance and life-cycle costs.

Rationale:

Overview Questions:
1. How are facilities inventoried and maintained?
2. How does URP integrate sustainable practices?
3. How does URP ensure that facilities, workspaces, and equipment are considered in decision-making?
4. How is URP intentional about space allocation and usage?

Part 12: ASSESSMENT

Suggested Evidence and Documentation:
1. Program goals, key indicators, outcomes, and related assessment data
2. Program student learning and development outcomes and related assessment data
3. Description of assessment cycle
4. Assessment plans and annual assessment reports
5. Minutes of meetings at which assessment activities and results discussed
6. Professional development activities to improve assessment competence

Criterion Measures:

DNA	IE	0	1	2	3
Does Not Apply	Insufficient Evidence/ Unable to Rate	Does Not Meet	Partly Meets	Meets	Exceeds

12.1 Assessment Plan and Practice
- Undergraduate Research Programs (URP) develops an ongoing cycle of assessment plans, processes, and activities.
- URP identifies programmatic goals and intended program outcomes as well as outcomes for

student learning and development.
- URP identifies and assesses the student learning and development outcome domains and dimensions relevant to participation in the program.
- URP documents progress toward achievement of goals and outcomes.
- URP employs multiple measures, methods, and manageable processes for gathering, interpreting, and evaluating data.
- URP incorporates the judgments of faculty and staff mentors and reflections of undergraduate student researchers in assessments.
- URP employs ethical practices in the assessment process.
- URP has access to adequate fiscal, human, professional development, and technological resources to develop and implement assessment plans.

Rationale:

12.2 Reporting and Implementing Results
- URP interprets and uses assessment results to demonstrate accountability and inform planning and decision-making.
- URP reports aggregated results to respondent groups and stakeholders.
- URP assesses effectiveness of implemented changes and provides evidence of improvement of programs and services.

Rationale:

Overview Questions:
1. What is the comprehensive assessment strategy for URP?
2. What are priorities of the assessment program, and how are those developed?
3. How does URP integrate assessment and evaluation into all aspects of daily operations (e.g., advising, event planning)?
4. How are tangible, measurable learning and program outcomes determined to ensure the achievement of URP mission and goals?
5. How effective is the assessment strategy in demonstrating goal achievement and student learning?
6. How does URP use assessment results to inform program improvement?
7. How does URP share assessment results with relevant constituencies?
8. How does URP support ongoing development of assessment competencies for personnel?

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

Work Form A – Rating Discrepancies

INSTRUCTIONS:

This work form should be completed following a review of the individual ratings of the team members. Item numbers for which there is a substantial rating discrepancy should be discussed before completing the remaining work forms. Discrepancies among ratings should be identified, discussed, and reconciled for consensus.

Part	Discrepancies	Resolution/Final Decision
1. Mission		
2. Program		
3. Organization and Leadership		
4. Human Resources		
5. Ethics		
6. Law, Policy, and Governance		
7. Diversity, Equity, and Access		
8. Internal and External Relations		
9. Financial Resources		
10. Technology		
11. Facilities and Equipment		
12. Assessment		

Work Form B – Strengths and Areas for Improvement

INSTRUCTIONS:

This work form should be completed following a review of the individual ratings of the team members. Examine the ratings of each criterion measure by the team members, and record the following in the form below:

- Strengths: Item number(s) for which all participants have given a rating of 3, indicating agreement that the criterion *exceeds* the standard.
- Areas for Improvement: Item number(s) for which all participants have given a rating of 0 or 1, indicating agreement that the criterion *does not meet* or *partly meets* the standard. Items rated IE for *insufficient evidence/unable to rate* should be listed here as well.

Note – Items not listed in one of these categories represent consensus among the raters that practice in that area is satisfactory, having been rated a 2, which indicates agreement that the criterion *meets* the standard.

Part	Strengths: Items that exceed the standard (consensus ratings = 3)	Areas for Improvement: Items that do not meet or partly meet the standard (consensus ratings = 0, 1)
1. Mission		
2. Program		
3. Organization and Leadership		
4. Human Resources		
5. Ethics		
6. Law, Policy, and Governance		
7. Diversity, Equity, and Access		
8. Internal and External Relations		
9. Financial Resources		

10. Technology		
11. Facilities and Equipment		
12. Assessment		

Work Form C – Recommendations for Unit Action

INSTRUCTIONS:

This is the last form to be completed by the review team. List the items needing follow-up action for improvement and indicate what requires attention. The team or coordinator should consider including any criterion measure rated as being not met by the reviewers, as well as those with significant discrepancies that are not resolved by team discussion.

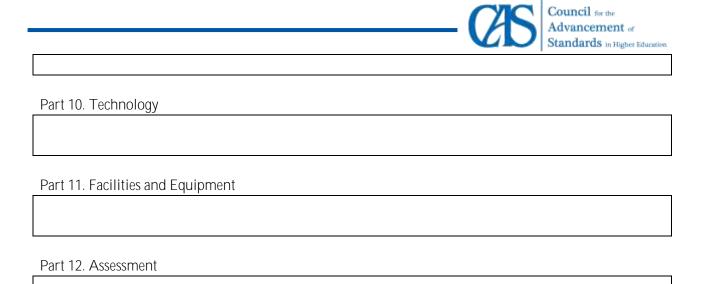| Part	Item Requiring Attention
1. Mission	
2. Program	
3. Organization and Leadership	
4. Human Resources	
5. Ethics	
6. Law, Policy, and Governance	
7. Diversity, Equity, and Access	
8. Internal and External Relations	
9. Financial Resources	
10. Technology	
11. Facilities and Equipment	
12. Assessment	

Work Form D – Beginning the Action Plan

<u>INSTRUCTIONS</u>:

This work form is for use by the staff of the unit being reviewed and is the first step in identifying the actions to be taken as a consequence of study results. Using the Items Requiring Attention listed in Work Form C, write a brief action plan that identifies the focus and intended outcomes of the next steps in to be taken in each area.

Part 1. Mission

Part 2. Program

Part 3. Organization and Leadership

Part 4. Human Resources

Part 5. Ethics

Part 6. Law, Policy, and Governance

Part 7. Diversity, Equity, and Access

Part 8. Internal and External Relations

Part 9. Financial Resources

Part 10. Technology

Part 11. Facilities and Equipment

Part 12. Assessment

Work Form E – Action Plan

Using this work form, the unit staff will turn the summary of areas to be addressed identified by the review team (Work Form D) into a specific plan of action. After reviewing the information provided in Work Forms B and C, unit staff teams should describe practices in need of improvement, the actions to be taken, the individual responsible, and the timeline for achieving compliance with the standard.

Current Practice Description	Corrective Action Needed	Task Assigned To	Timeline/ Due Dates

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 a**nd 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