

Framework for Success Undergraduate Research

G E O R G I A C O L L E G E H I G H - I M P A C T P R A C T I C E S Crafted by: Hasitha Mahabaduge, Jennifer Flaherty, & Wathsala Medawala

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Component — 4 - Highest Impact 3 - Higher Impact 2 - High Impact 1 - Missing or Low Impact

Definition of HIP — Undergraduate Research (UR): The Council of Undergraduate Research (CUR) defines it as "An inquiry or investigation conducted by an undergraduate student that makes an original, intellectual, or creative contribution to the discipline(s)." "Undergraduate research, scholarship, and creative inquiry is fundamentally a pedagogical approach to teaching and learning. With an emphasis on process, CUR defines undergraduate research as: A mentored investigation or creative inquiry conducted by undergraduates that seeks to make a scholarly or artistic contribution to knowledge." — Updated 2021

*Because of the individual nature of UR, we have designed this rubric to evaluate specific projects conducted by individuals in classes and mentored research experiences except the Quality of the Program which is intended to use in evaluating UR at the department, college, and university levels.

Characteristic 1

Originality

4 - Highest Impact

The mentor (faculty or staff) provides opportunities for students to recognize, understand, develop, and/or complete original research projects related to the field of study, and the course meets **at least four** of the following criteria:

- The mentor facilitates students' learning experiences by clearly explaining best practices, standards, and expectations for conducting research in the area of study, including how the concept of originality is defined by experts in that field.
- The mentor helps students to recognize and evaluate existing research in the field (e.g. conducting a literature review, creating an annotated bibliography, or replicating an experiment). to get a better sense of what constitutes an original contribution to the field.

3 - Higher Impact

The mentor (faculty or staff) provides opportunities for students to recognize, understand, develop, and/or complete original research projects related to the field of study, and the course meets **at least three** of the following criteria:

- The mentor facilitates students' learning experiences by clearly explaining best practices, standards, and expectations for conducting research in the area of study, including how the concept of originality is defined by experts in that field.
- The mentor helps students to recognize and evaluate existing research in the field (e.g. conducting a literature review, creating an annotated bibliography, or replicating an experiment). to get a better sense of what constitutes an original contribution to the field.

2 - High Impact

The mentor (faculty or staff) provides opportunities for students to recognize, understand, develop, and/or complete original research projects related to the field of study, and the course meets **at least two** of the following criteria:

- The mentor facilitates students' learning experiences by clearly explaining best practices, standards, and expectations for conducting research in the area of study, including how the concept of originality is defined by experts in that field.
- The mentor helps students to recognize and evaluate existing research in the field (e.g. conducting a literature review, creating an annotated bibliography, or replicating an experiment). to get a better sense of what constitutes an original contribution to the field.

1 - Missing or Low Impact

Attempts are made to provide opportunities for original research projects (as defined by the field) at the undergraduate level, but resources and support might be limited due to **one or more** of the following factors:

• Class size might be too large for the mentor to adequately facilitate unique and original research opportunities for students.

- Best practices for original research in the field are integrated into the assignments in the course, giving students the autonomy to develop their own research questions, hypotheses, proposals, methods, and/or topics.
- Components of at least one research project that allows for student originality as a contribution to the field of study are scaffolded throughout the course to provide support and mentorship to students.
- The originality of the students' work in one or more research projects is reflected in the course grade in some way (for example, students might be evaluated on how they support a unique and impactful argument in a research paper, or develop an original experiment with the potential to contribute new knowledge to the field, or a creative and effective way to address the concerns of a client, or an innovative technique or approach to a creative performance).
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- Course load might be too heavy for the mentor to adequately facilitate unique and original research opportunities for students.
- Access to opportunities to produce original research projects might be difficult for students because of prohibitive costs (for example, travel costs or material costs for the research project) or the amount of time needed to commit to developing the project outside of class time.

Characteristic 2

Dissemination

4 - Highest Impact

The mentor provides opportunities for students to disseminate their research, in the classroom or in professional settings related to the field of study such as conferences, client meetings, community engagement, posters or publications, and the course meets **at least four** of the following criteria:

- The mentor provides opportunities to students to disseminate their research with their peers in the course in a manner appropriate for the field (presentations, workshops, poster exhibits, etc.)
- The mentor researches potential opportunities for dissemination beyond the classroom, making that information readily available to all students.

3 - Higher Impact

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- The mentor researches potential opportunities for dissemination beyond the classroom, making that information readily available to all students.

2 - High Impact

The mentor provides opportunities for students to disseminate their research, in the classroom or in professional settings related to the field of study such as conferences, client meetings, community engagement, posters or publications, and the course meets **at least two** of the following criteria:

- The mentor provides opportunities to students to disseminate their research with their peers in the course in a manner appropriate for the field (presentations, workshops, poster exhibits, etc.)
- The mentor researches potential opportunities for dissemination beyond the classroom, making that information readily available to all students.

1 - Missing or Low Impact

Attempts are made to provide opportunities for dissemination. Some students in the course have the opportunity to share their research projects, but resources and support might be limited due to **one or more** of the following factors:

• Class size might be too large for the mentor to provide opportunities for all students to present research within class time.

- Best practices for dissemination in the field are fully integrated into the discussions, readings, and assignments in the course.
- Components of the research project are scaffolded throughout the course to provide support and mentorship to all students, helping them to prepare for successful dissemination.
- Successful dissemination of one or more research projects is reflected in the course grade in some way (potentially as extra credit in fields or courses that are more difficult for undergraduate dissemination).
- Best practices for dissemination in the field are fully integrated into the discussions, readings, and assignments in the course.
- Components of the research project are scaffolded throughout the course to provide support and mentorship to all students, helping them to prepare for successful dissemination.
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- Successful dissemination of one or more research projects is reflected in the course grade in some way (potentially as extra credit in fields or courses that are more difficult for undergraduate dissemination).
- Course load might be too heavy for the mentor to adequately research opportunities for students to disseminate research beyond the classroom.
- Access to opportunities to disseminate research might be difficult for students because of prohibitive costs (for example, travel and registration costs at a conference) or the amount of time needed to commit to presenting the project outside of class time (for example, time to attend a conference).

Characteristic 3

Mentorship

4 - Highest Impact

The mentor consistently provides $\ensuremath{ \text{at least four}}$ of the following functions:

- The mentor educates, evaluates, and challenges mentees academically and professionally by providing training and opportunities that include undergraduate research projects that are appropriate for the field of study.
- The mentor serves as a role model for mentees' behavior, values, and attitudes.

3 - Higher Impact

The mentor consistently provides **at least three** of the following functions:

- The mentor educates, evaluates, and challenges mentees academically and professionally by providing training and opportunities that include undergraduate research projects that are appropriate for the field of study.
- The mentor serves as a role model for mentees' behavior, values, and attitudes.

2 - High Impact

The mentor consistently provides **at least two** of the following functions:

- The mentor educates, evaluates, and challenges mentees academically and professionally by providing training and opportunities that include undergraduate research projects that are appropriate for the field of study.
- The mentor serves as a role model for mentees' behavior, values, and attitudes.

1 - Missing or Low Impact

The mentor provides **one or fewer** of the following functions:

- The mentor educates, evaluates, and challenges mentees academically and professionally by providing training and opportunities that include undergraduate research projects that are appropriate for the field of study.
- The mentor serves as a role model for mentees' behavior, values, and attitudes.

- The mentor provides psychological and emotional support to mentees by encouraging them and helping the individuals to grow.
- The mentor provides support for assessing and choosing an academic and career path by evaluating mentees' strengths, weaknesses, interests, and abilities.
- The mentor publicly acknowledges the achievements of mentees and advocates for mentees.
- The mentor provides psychological and emotional support to mentees by encouraging them and helping the individuals to grow.
- The mentor provides support for assessing and choosing an academic and career path by evaluating mentees' strengths, weaknesses, interests, and abilities.
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- The mentor provides support for assessing and choosing an academic and career path by evaluating mentees' strengths, weaknesses, interests, and abilities.
- The mentor publicly acknowledges the achievements of mentees and advocates for mentees.

Quality of the Program

Was the program of high caliber?

4 - Highest Impact

The program meets **all** of the following criteria:

- Provides opportunities for students to participate through curricular integration of undergraduate research (primarily through research courses, independent study, and experiential education).
- Provides additional venues for students to immerse in UR outside of classroom (e.g. summer research).

3 - Higher Impact

The program provides opportunities for students to meet **at least three** of the following criteria:

- Provides opportunities for students to participate through curricular integration of undergraduate research (primarily through research courses, independent study, and experiential education).
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- Provides additional venues for students to immerse in UR outside of classroom (e.g. summer research).

1 - Missing or Low Impact

The program provides opportunities for students to meet **one or fewer** of the following criteria:

- Provides opportunities for students to participate through curricular integration of undergraduate research (primarily through research courses, independent study, and experiential education).
- Provides additional venues for students to immerse in UR outside of classroom (e.g. Summer research).

- Provides opportunities for dissemination of results (e.g. travel funding through organizations such as MURACE and SGA).
- Provides administrative support including recognition, funding, faculty development opportunities, course release and manageable teaching load.
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- Provides administrative support including recognition, funding, faculty development opportunities, course release and manageable teaching load.

Inclusivity

How likely was every participant exposed to each component of the program?

4 - Highest Impact

Structures are in place to prevent discrimination and provide equitable exposure. Every student in the course has the opportunity to participate in research projects and the resources and support necessary to complete the projects regardless of background and the course meets **all** of the following criteria:

- Each student participates in at least one major research (as defined by the field of study) project in the course
- Best practices of research in the field are fully integrated into the readings and assignments on the syllabus
- Components of the research project are scaffolded throughout the course to provide support and mentorship to all students
- Successful completion of one or more research projects represents at least 40% of the course grade.

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• Each student participates in at least one major research (as defined by the field of study) project in the course

1 - Missing or Low Impact

Attempts are made to prevent discrimination and provide equitable exposure. Some students in the course have the opportunity to participate in research projects regardless of background, but resources and support might be limited due to **one or more** of the following factors:

• Each student participates in at least one major research (as defined by the field of study) project in the course

- Best practices of research in the field are fully integrated into the readings and assignments on the syllabus
- Components of the research project are scaffolded throughout the course to provide support and mentorship to all students
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Responsiveness/Engagement

How engaged were the participants of the program?

4 - Highest Impact

Faculty engage students in an active role during research experience. **At least four** of the following are fulfilled during the process.

- Collecting and summarizing existing research or cultural productions, such as in a literature review.
- Analyzing existing research according to disciplinary requirements.
 - 3 Higher Impact

Faculty engage students in an active role during research experience. **At least three** of the following are fulfilled during the process.

- Collecting and summarizing existing research or cultural productions, such as in a literature review.
- Analyzing existing research according to disciplinary requirements.

2 - High Impact

Faculty engage students in an active role during research experience. **At least two** of the following are fulfilled during the process.

- Collecting and summarizing existing research or cultural productions, such as in a literature review.
- Analyzing existing research according to disciplinary requirements.

1 - Missing or Low Impact

Faculty only engage students in passive research experiences. Examples may include:

- Collecting and summarizing existing research or cultural productions, such as in a literature review.
- Analyzing existing research according to disciplinary requirements.

- Synthesizing a hypothesis, argument, or answer to a research question through evaluation of existing data.
- Performing and/or improving existing research designs/tools.
- Performing experiments to test a hypothesis or producing an artistic performance.
- Developing a presentation, research paper or a performance to disseminate research/creative endeavors to an appropriate audience for the field.
- Synthesizing a hypothesis, argument, or answer to a research question through evaluation of existing data.
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Complexity

To what level of complexity were students exposed?

4 - Highest Impact	3 - Higher Impact	2 - High Impact	1 - Missing or Low Impact
Faculty exposes students to a variety of complex tasks, requiring students to	Faculty exposes students to more complex tasks, requiring higher levels of	Faculty exposes students to more complex research tasks.	Faculty exposes students to lower level research tasks.
demonstrate higher level of research skills.	research skills. E.g. Finding gaps in existing	E.g. Comparing, analyzing, and evaluating existing research findings.	E.g. Reading, organizing, and reporting existing research findings.
E.g. Successfully apply research knowledge to partially or completely fill	research findings and attempting to apply research skills to contribute to existing		
gap(s) in existing research.	knowledge.		

DEFINITIONS

Quality

Refers to the structure and logistics of the program. Does the program lay out in easy-to-understand terms the timelines, location of documents, steps to get involved, who to contact, etc. A wellstructured and clearly defined experience is one that allows people to know exactly what they need to do and how.

Inclusivity

Focuses on the equity piece of the programming and whether each participant is able to participate. Reviewers would look for whether certain groups of participants are assigned less meaningful task (think women being assigned to take notes while men are being asked to make executive decisions) or are groups being given special access not normally available to other participants? Structures that prevent discrimination on whatever basis are ones that will ensure that all participants gain the most from the experience.

Responsiveness

Looks at the level of engagement of a program. Programs can ask participants to engage with the experiences by observing or through passive activities or by actively performing the steps necessary to understand and appreciate what they are learning. An example of low responsiveness in a study abroad program, for example, would be placing participants in a tour, where they are passive participants. High responsiveness would, instead, ask students to engage with their host family, participate in cultural activities, converse with locals, collaborate with international participants, etc. The level of responsiveness has to do with how engaged the participants are in learning about the experiences of the HIP.

Complexity

Examines the degree participants are asked to demonstrate their skills. Simple tasks, requiring lowlevel skills, would rate low on the complexity scale. More complex tasks that require the creation of materials or approaches, synthesis of information, or deep analysis would rate high on the complexity scale. Consider the tasks that may be required of participants in an internship. Filing papers or getting coffee or reading company literature would rate lower on the complexity scale whereas analyzing quarterly results, creating reports, developing strategic plans would rate higher on the scale.







