

HIGH-IMPACT UNDERGRADUATE RESEARCH EXPERIENCES @UND

UND is providing undergraduate research experiences for students in many disciplines. Faculty are reshaping courses to connect key concepts and questions with students' early and active involvement in systematic investigation and research. The goal is to involve students with actively contested questions, empirical observation, cutting-edge technologies, and the sense of excitement that comes from working to answer important questions.

To qualify as a high-impact undergraduate research experience, **the following six required key elements must be present, with the remaining two elements encouraged.**

Key Elements	Required?	Expected Features	Illustrative Examples
Performance expectations set at appropriately high levels	Yes	Performance expectations should be appropriate for level of education, class standing, and prior research experience.	Conducting a literature review, administering experimental procedures.
Significant investment of time and effort by students over an extended period of time	Yes	An activity that comprises at least one credit worth of work, and often would be more.	Investment of time tied to number of credit hours or other form of compensation throughout the course of a semester (or longer).
Interactions with faculty and peers about substantive matters	Yes	Research experiences that promote student interaction with faculty, peers, and/or other members of their discipline, which contribute to their knowledge.	As part of undergraduate research experience, students should work closely with faculty, graduate students, and/or other peers to accomplish research goals. Research experience may take place in a lab setting, as part of a larger course, or under some other form of supervision (e.g. assisting with editing a journal).
Frequent, timely, and constructive feedback	Yes	Feedback can come from faculty, lab supervisors, peers, and/or other people assisting with research and can be written or verbal.	Small group discussions or lab meetings; student lead presentations; feedback on performance; feedback on drafts of papers, posters, or presentations; attendance at out-of-class events such as conferences which provide opportunities to dialogue with peers, faculty and/or community partners.
Periodic, structured opportunities to reflect and integrate learning	Yes	Students should be given the opportunity to reflect on what they have learned and should be encouraged to make connections to other coursework as well as future educational goals.	Reflection papers; literature reviews; development of CV or resume with opportunity for feedback.
Opportunities to discover relevance of learning through real-world applications Or	Yes	In the case of undergraduate research, either making connections to real-world applications OR being given the opportunity to understand and apply research methods appropriate to one's discipline are acceptable.	Conducting research (carrying out experimental procedures); data analysis; assisting with writing up papers for publication; learning about publication process.

Opportunities to understand and apply discipline specific methodology			
Experiences with diversity, wherein students are exposed to and must contend with people and circumstances that differ from those with which students are familiar	Encouraged	Opportunities to demonstrate intercultural awareness and skills through significant interaction with others from different backgrounds and/or opportunities to apply in-depth knowledge of diversity and cultural competence to contemporary issues.	May vary based on discipline and type of research.
Public demonstration of competence	Encouraged	Students demonstrate competence publicly in a format relevant to their field of study. This demonstration should provide students the opportunity to showcase integrated learning throughout their course of study.	A public talk; presenting a poster at a campus-wide research event; a public art exhibit; a public recital; an engineering design expo.

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