

ASSESSMENT AND EVALUATION OF A NOVEL ONLINE UNDERGRADUATE RESEARCH CURRICULUM

2022 ConnectUR Annual Conference

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Office of Undergraduate Research

6/3/2022 |



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The Big Picture: Undergraduate Research within the University

Practices that improve the student experience and persistence (HIPs):

- First-year seminars and experiences
- Common intellectual experiences
- Learning communities
- Writing-intensive courses
- Collaborative assignments and projects
- Diversity/Global learning
- ePortfolios
- Internships
- Capstone courses and projects
- Service learning, Community-based learning
- **Undergraduate research**

University



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Online
Undergraduate
Research
Curriculum



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The Big Picture: Office of Undergraduate Research (OUR)

UG Recruitment

- OURConnect
- Research Roundtables
- OUR Scholars
- FY URE Program
- One-on-One Consultations

Program Support

- **Online Courses**
- CURE – Purdue Fellows Program
- UG Research Conferences
- Grant Funding
- Seminars
- Mentorship
- Evaluation & Assessment

Consultation

- Grant Proposals
- Program Design
- Program Implementation
- Ongoing Program Administration

Communication

- Newsletters
- Website
- Social Media
- Course Presentations
- Student Organizations

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Online Undergraduate Research Curriculum



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The Big Picture: Online Undergraduate Research Curriculum

We offer 5 one-credit courses for prospective and current researchers

- GS19501/ILS18000: Preparing for Your Undergraduate Research Experience
- GS29501/ILS28000: Understanding Your Undergraduate Research Experience I
- GS39501/ILS38000: Understanding Your Undergraduate Research Experience II
- GS49501/ILS48000: Beyond Undergraduate Research (graduate/professional school prep)
- ILS4950000: Research Peer Mentoring

<https://www.purdue.edu/undergrad-research/students/courses.php>



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Online Course Research Model: Questions

Guiding research questions (IRB approved studies):

- *What are the experiences, perceptions, and outcomes of students in undergraduate research experiences?*

Basic institutional reporting questions:

- *What is the count of [subgroup] who [did something] within [time frame]?*

Internal assessment/evaluation:

- *What [within course] was done well?*
- *What [within course] should be done differently or better to improve your experience?*



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Online Course Research Model: Data Collected

▪ Student Survey (not formal course evaluation)

- Instructor, video expert, and overall ratings (excellence)
- Instructor and video expert characteristics (excellence)
- Benefits of the course (gains)
- Assignments (effectiveness)
- Assignment rubrics (helpfulness)
- Course outcomes/goals (agreement)
- Other minor categorical questions

▪ Course artifacts

- Informally, all course artifacts used by the instructors for immediate in-term course improvements.
- Formally, all artifacts covered by the IRB, and could be used in document analyses.

▪ Student Focus Groups: (for targeted cases)

- Interest or motivation to participate in the course.
- Perceptions of self (as a student and/or researcher) and of the course.
- Perceived benefits and/or unintended outcomes of the course and/or research experiences.
- Perceived knowledge and/or skills required to be a researcher.
- Methods used in learning about research and/or conducting research.
- Intended learning outcomes for the course and/or other research experiences.
- Intended personal/professional goals for conducting research.
- Impact of the course on other experiences (e.g., courses, research, etc).
- Strengths of the course; weaknesses/limitations of the course.
- Preparation for research; reflection about research.



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Online Course Research Model: Reporting and Consequences

Current Reporting

- Office: Survey items reported via dashboards, enabling comparisons over time and between courses.
- Office: Focus groups summarized for themes.
- University: Content extracted from office reports given to university stakeholders.

Future Reporting

- These data set up to be used in research studies about:
 - The courses
 - Targeted enrollees, participating in another program. (e.g., a reflective journal created for the course, with topics covering their research experience.)

Consequences

- Continuous course improvement, including:
 - Within the term (ex: If outcome not being met, changing future course content)
 - Between terms (ex: changing assignments)
 - Between courses (ex: relating prior/current content in course sequences)
- Increasing enrollments, likely a consequence of improving course quality.
- Contributing to the field, through presentations and future publications.



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For more information...



This QR code will take you to a website with information from multiple ConnectUR presentations by staff in the Purdue University Office of Undergraduate Research.

Of related interest, please consider attending this ConnectUR presentation:

Title: Developing online courses to expand undergraduate research across campus

Day/Time: Friday, 6/24 Series IX, 2:15-2:30pm

Presenters: JJ Sadler, Tuhin Dey, and Amy Childress



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