

Building a Sustainable Model of Undergraduate Research

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Building a Culture of UR

- Ensures sustainability
- Requires broad faculty & institutional buy-in
- Changes how we teach
- Created and sustained through effective programming

Main Types of UR Experiences

- Course-Embedded Research ([define here](#))
- Theses
 - Required
 - Departmental 'honors'
- Game and Competitions
- Faculty Collaboration
 - Summer UR experiences (paid)
 - RA experiences (paid)

Three is the key

- Research experiences **must** be built into graduation requirements
- At a minimum, students should get 2 course-embedded research courses + 1 independent research experience:
 - Applied Econometrics
 - Advanced Research-Based Seminar
 - Independent Research Experience

Econometrics

- Messy vs. clean data
- Projects vs. problem sets
- Students choose their own question
- Must think about the data (variables) needed
- Apply appropriate methods
- Focus on data and methods more than literature and theory

Advanced Seminars

- May focus more on literature and theory than econometrics course
 - Complementary to econometrics
- Students learn to critically read articles
- Research papers:
 - e.g. Synthesis/Critique of literature
 - e.g. Formal research proposal

Two-Semester Thesis

- Fall: seminar course to propose a thesis
 - How to develop a feasible question
 - Ensures students understand expectations
 - Saves faculty time
 - Builds community within majors
 - Opportunities for peer review/feedback
- Spring: independent, one-on-one mentored thesis
- Conference or on-campus formal presentation

Incentives Matter

- Faculty should get credit for mentoring theses
 - 12 theses = 1 course
 - May take cash equivalent
- Merit raises and promotion should value mentoring

Course-Embedded Research

- Students are engaged in the process of **discovery**
- The **knowledge** created is valued within the discipline, but not novel
- Students **guided** in this process by faculty with disciplinary expertise
- While guided by faculty, there is **decision-making agency by students** in one or more steps in the research process
- Students participate in **multiple steps of the research and/or creative process** within that discipline
- One or more steps are **iterated** (reflected upon and repeated) within the course
- Students **communicate** results, although not necessarily beyond the scope of the course