UNDERGRADUATE RESEARCH

The Faculty of Science invites all who are interested to attend a seminar by Elaine Seymour.

Date    Thursday, 12 November 2009
Time    9.00 – 11.00am (includes morning tea)
Room    Skerman (building 65), room 305

Direct any questions to Louise Mattick at l.mattick@uq.edu.au

The ‘research-teaching nexus’ is a critical aspect of the “UQ Advantage”, and undergraduate research experiences are increasingly being seen as the bridge between research and teaching. The new UQ Summer Research Scholarship scheme offers students an intensive research placement in which they are working on real research. Questions which arise around this area include:

- How does undergraduate research benefit students?
- How does it benefit researchers?
- How can we design undergraduate research experiences to enhance benefits for students and researchers?
- How do we select students for undergraduate research placements?

Elaine Seymour has led a comparative, longitudinal study into the nature, benefits, and costs of summer research experiences for both students and academic staff/faculty, and the processes whereby gains are achieved. To begin, she will present the findings of this study. Then Elaine will discuss strategies that can be used to gain better outcomes from undergraduate research experiences.
Elaine Seymour was co-founder and, for seventeen years, Director of Ethnography & Evaluation Research (E&ER) at the University of Colorado, Boulder. Her research and evaluation work has focused on issues of change in STEM education and careers, including evaluation of initiatives seeking to improve quality, access, and diversity in these fields. In recognition of her work on women in science, WEPAN awarded her their 2002 Betty Vetter Award for Research. Her best-known work, co-authored with Nancy M. Hewitt, *Talking about Leaving: Why Undergraduates Leave the Sciences*, (1997), is widely cited for its contribution to the nationwide effort to improve undergraduate education in the sciences. In 2005 she and E&ER members published, “*Partners in Innovation: Teaching Assistants in College Science Courses*” drawing on their science education studies. Seymour has written widely and testified before the United States Congress on trends and needs in the reform of STEM education. Her work has also pioneered and established the value of qualitative inquiry in understanding complex issues in this field.

In response to the learning assessment needs of classroom innovators, Elaine designed two online resources: the Field-Tested Learning Assessment Guide (FLAG), [http://www.wcer.wisc.edu/archive/cl1/flag/default.asp](http://www.wcer.wisc.edu/archive/cl1/flag/default.asp) and the widely-used Student Assessment of their Learning Gains (SALG) online instrument [www.salgsite.org](http://www.salgsite.org). This is currently being redesigned and expanded, including the addition of URSSA, an assessment instrument for undergraduate research programs. Elaine led E&ER’s comparative, longitudinal inquiry into the nature, benefits, and costs of summer research experiences for both students and faculty, and the processes whereby gains are achieved. In addition to articles already published, the findings from this study will be presented as a book (*Undergraduate Research in the Sciences: Engaging Students in Real Science*) by Jossey-Bass early in 2010. In “retirement” she is helping to organize a national endeavor, “Mobilizing STEM Education for a Sustainable Future.” She is a sociologist and a British-American whose education and career have been conducted on both sides of the Atlantic.