

# Cognitive Science – Research-based teaching

As many of you will know already, staff in HUMCASS were successful in obtaining over a third of a million dollars from the Commonwealth Government's Sustainable Regions program last year to set up a Bionics and Cognitive Science Centre at the Gippsland campus. Research is progressing nicely, with approximately 20 staff, students, and affiliates outside of Monash contributing in various ways to the centre's activities.

In conjunction with the research unit, a new teaching program, the Bachelor of Cognitive Science, was approved late last year. The degree includes cognitive psychology, and

multimedia computing, with lesser inputs from philosophy and robotics.

In order to integrate the work of the research centre with the new degree program, a research-based approach to teaching will be introduced next year. Research-based teaching takes a top-down approach. The usual method of teaching undergraduate students is to start at the bottom, building a foundation of facts and adding more layers to these over a three-year period. The knowledge acquired then gets applied in research when the student goes on to further studies or a job.

In research-based teaching the students will be given the

details of a real research project being conducted at the centre at the beginning of each teaching unit. They will have the problem being addressed by the research explained to them and they'll be shown how the researchers are setting about solving that problem. They'll spend the semester developing the necessary background and methodological knowledge to understand the project and possibly contribute to the way in which the investigation proceeds. Much of the material that the students cover will be the same as they would acquire in more normal teaching modes, but there will be a purpose or need to

acquire the information that hopefully transcends simply passing an exam at the end of the year. As the research projects of the centre advance and as new projects are taken on, the focus of the teaching units will change also.

At first-year level, because a relatively broad spectrum of material and methods needs to be covered, a series of projects will be included. Again, as far as possible, this will use a hands-on approach, rather than more passive knowledge acquisition.

For more information go to our website:  
<http://www.arts.monash.edu.au/humcass/teaching/cogsci.html>