

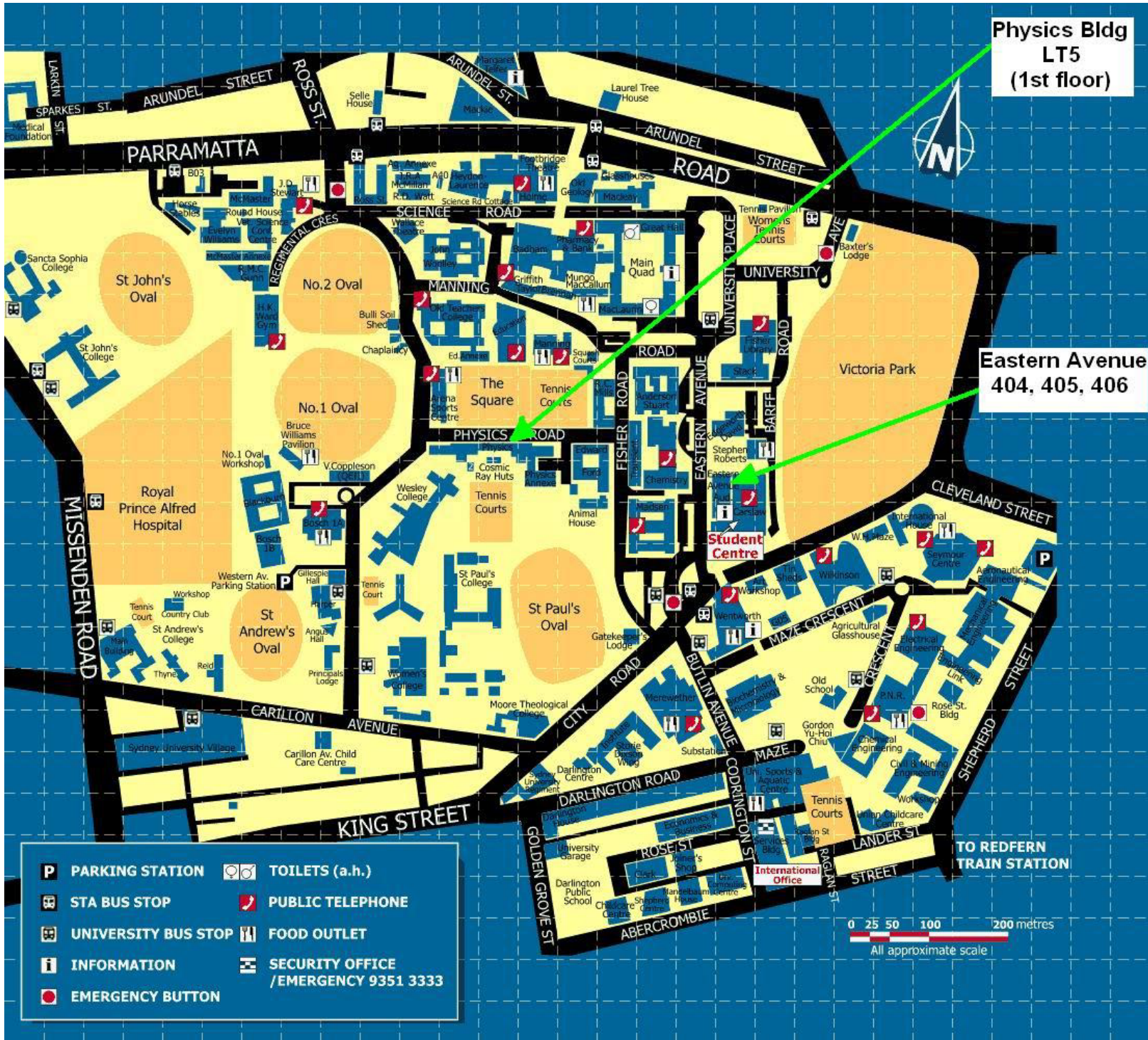
Key Issues in Learning and Teaching in Undergraduate Physics – A National Workshop

University of Sydney
Wednesday 28 September 2005

Morning session (08:45 – 14:00) in the main Physics building (Lecture Theatre 5, 1st floor)

08:45 – 09:10	Welcome and introduction to the workshop
09:10 - 09:30 Showcase Topic 1	<p>Promotion of Careers in Physics: A Challenge!</p> <p><i>Bill Zealey</i></p> <p>University physics is changing. In response to the need to become more relevant departments have introduced applied (and in some cases almost vocational) degree programs. These “market driven” changes lead us to review the following questions:</p> <ul style="list-style-type: none"> • How do we market our degrees to students? • What careers do we prepare them for? • What careers do physics graduates seek? • How far should we interact with industry in adapting our degrees to their needs?
09:30 – 09:50 Showcase Topic 2	<p>How (and Where) to get Physics Education Research Published</p> <p><i>Manjula Sharma</i></p> <p>Getting physics education work published and considered as research publications raises questions such as:</p> <ul style="list-style-type: none"> • What constitutes physics education research? • How can teaching developments projects generate publishable results? • What journals are appropriate and/or available? <p>Answers to these and other questions from the audience will be explored.</p>
09:50 - 10:10 Showcase Topic 3	<p>Graduate Attributes, do we Explicitly Address them in our Curricula?</p> <p><i>David Mills</i></p> <p>Surveys of physics graduates in the workplace show conclusively that problem solving skills and communication skills rank higher than specific knowledge. The emphasis of our curricula is often the reverse. We will look at some approaches to help achieve the best outcomes for our graduates.</p>
10:10 - 10:30 Showcase Topic 4	<p>Effective Strategies for Interactive Large Group Teaching and Learning</p> <p><i>Ian Johnston</i></p> <p>Between 1999 and 2003, the School of Physics at the University of Sydney carried out several different trials to assess the teaching effectiveness of Interactive Lecture Demonstrations (ILDs) in first year physics courses. These investigations involved several different lecturers, and some coordination with a physics department at a university in Thailand. Treating this as a case study in teaching intervention, the speaker will offer some personal reflections on wider questions thrown up by the experience.</p>

10:30 - 10:50	<p>Address by Adrian Lee</p> <ul style="list-style-type: none"> - Chair of AUTC Physics Project Steering Committee - Pro Vice Chancellor UNSW (Education and Quality Improvement)
10:50 - 11:20	Morning Tea
11:20 - 12:50	<p>Physics Tutors and Laboratory Demonstrators: Issues Involved in Teaching Sessional Staff to Teach Students</p> <p><i>Susan Feteris and Marjan Zadnik</i></p> <p>Students' closest contacts are with tutors and demonstrators – usually sessional staff. It is critical that these staff are effective teachers who encourage and support student learning, are familiar with academic and safety obligations, and can advise on academic matters. How do we develop such professionalism in a time poor environment? Issues, strategies and materials from two well-established tutor and laboratory demonstrator workshop programs will be discussed and demonstrated. Participants will leave with ideas, tools and materials to enhance their own programs.</p>
12:50 - 14:00	Lunch
Afternoon session (14:00 – 18:00) in the Eastern Avenue Complex (Rooms 404, 405 and 406)	
14:00 - 15:30	<p>Undergraduate Projects</p> <p>Discussion on the variety of ways undergraduate projects are utilised, the features they share and their effectiveness as a mode of learning. Good practices from QUT and WA will be featured.</p> <p>Moderators: <i>Manjula Sharma and Les Kirkup</i></p> <p>Assessment/Feedback</p> <p>Exploring the ways to use both as effective learning tools (also include graduate attributes).</p> <p>Moderators: <i>Michelle Livett, David Low, Judith Pollard and Kate Wilson</i></p>
15:30 - 16:00	Afternoon Tea
16:00 - 17:30	<p>On-line Learning Tools</p> <p>Exploration of the range, benefits and limitations of web based tools. MasteringPhysics and WebCT quizzes will be featured.</p> <p>Moderators: <i>Alex Merchant, John O'Byrne and Geoff Swan</i></p> <p>Diverse Student Backgrounds (Service Teaching)</p> <p>Exploring ways to cater for and retain students with vastly differing backgrounds. Good practices from New England, La Trobe and UTS will be featured.</p> <p>Moderators: <i>David Mills and Manjula Sharma</i></p>
17:30 - 18:00	Recap and consolidation
18:00 onwards	Dinner at a nearby restaurant for those interested!



Physics Bldg
LT5
(1st floor)

Eastern Avenue
404, 405, 406

- P** PARKING STATION
- ST** STA BUS STOP
- UB** UNIVERSITY BUS STOP
- I** INFORMATION
- EM** EMERGENCY BUTTON
- TOILETS (a.h.)**
- PUBLIC TELEPHONE**
- FOOD OUTLET**
- SECURITY OFFICE /EMERGENCY 9351 3333**

0 25 50 100 200 metres
All approximate scale