

27 July 2004

**Explanation to Participants (other than academics and students)**

**AUTC Project - Learning Outcomes and Curriculum Development in Physics**

The Australian Universities Teaching Committee has commissioned a study of teaching and learning in tertiary physics in Australia. The project team, led by Dr David Mills of Monash University and Dr Manjula Sharma of the University of Sydney, represents 13 universities.

Most aspects of tertiary physics teaching will be covered in this study, including our response to new multidisciplinary areas, the role of new technologies, changing student backgrounds and expectations; changes in graduate employment destinations and employer requirements, the relationships with Engineering and with Biological Sciences, and the role of physics academics preparing teachers for schools. Among the benefits to the physics community will be a clear picture of the challenges and trends, and access to a range of successful strategies which have worked in particular situations.

Information is sought from graduates, employers of physics graduates and other stakeholders, in particular regarding to the preparedness of graduates for the workplace and regarding the contribution made by people and organizations outside physics departments to the shape of physics curricula. This will be in usually a phone or face-to-face interview taking around 30-45 minutes.

Information from you as a participant will be reported back to you for checking, in the form recorded by the project. This information will only be available to members of the project; it will be kept secure as required for research data and will be destroyed after 5 years.

The identity of participants contributing information will be protected and will not be disclosed. We will seek your explicit permission if we consider that it would be helpful to the physics or broader community to attribute a statement to you in the published report or other publications arising from the project.

Participation is voluntary and an individual may decline to be involved or may withdraw at any time.

Grievance procedures for this project are shown below.

We would like to inform you of the outcomes of the project, if you are interested. The overall report of the Project will be available via the web; if you wish to be informed of its release and web address please contact the Project officer.

Mr Alberto Mendez,  
alberto@physics.usyd.edu.au  
School of Physics,  
University of Sydney NSW 2006

Email:

Tel 02 9351 5982

If you have any queries please contact telephone Dr David Mills, details at foot of page.

Should you have any complaint concerning the manner in which this research ([project number 2004/042](#)) is conducted, please do not hesitate to contact the Monash University Standing Committee on Ethics in Research Involving Humans at the following address:

The Secretary  
The Standing Committee on Ethics in Research Involving Humans (SCERH)  
Building 3D  
Research Grants & Ethics Branch  
Monash University VIC 3800  
Tel: +61 3 9905 2052 Fax: +61 3 9905 1420 Email: [scerh@adm.monash.edu.au](mailto:scerh@adm.monash.edu.au)

Thank you.

Dr David Mills and Dr Manjula Sharma

# **AUTC Physics Project 2004**

## **Interview with the employers of recent graduates**

### ***General Consent Form (for interviews with graduates, employers, others)***

I agree to take part in the above research project. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that I am willing to:

- be interviewed by the researcher
- allow the interview to be audiotaped

I understand that a transcript of the interview will be forwarded for my approval before it is included in any publication of the research.

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way.

I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party.

**Name**

**Signature**

**Date**

Email completed form as an attachment to **alberto@physics.usyd.edu.au** or post to:

AUTC Physics Project Officer  
Alberto Mendez  
School of Physics  
University of Sydney  
NSW 2006, Australia

# **AUTC Physics Project 2004**

## **Interview with the employers of recent graduates**

This is one in a series of interviews with employers that have recently (in the last 5 years) hired staff who have completed a 3 or 4 year or Honours level undergraduate degree with a Physics major or a Physics-based multidisciplinary major. We'd like to gauge your opinions on the value of an undergraduate Physics major as demonstrated by your employee(s).

**Could you please provide the following information?**

Type of firm	
Jobs done by physics graduates	
Level of education of physics graduates	

**We would like you to think about physics graduates who have worked for you in the last few years. Please try to separate physics graduates early in their employment from those who have worked with you for some time. We would also like to concentrate on graduates with a basic (not postgraduate) degree with a Physics major.**

**Are there special knowledge, skills and approaches that these Physics graduates have?**

**Please comment on their ability to learn and adapt.**

**How could Physics graduates be better? Do fresh graduates from other disciplines meet these expectations? Is it reasonable to expect university graduates to come with these attributes or are they better learnt/developed at work?**

**After a couple of years of employment, are Physics graduates different from those from other disciplines? If yes, in what way?**

**Would you employ a Physics graduate in preference to those from other disciplines? If so why?**

## Graduate attributes table

Please fill in the first four columns of the following table by ticking the box that represents the level to which your employee(s) with a Physics education demonstrated a particular attribute, as gauged at the start of their employment with you, *i.e. the attributes they have*.

	Have attribute				Required (greater, less or OK)
	not at all	a little	some	a lot	
<i>computational skills</i>					
<i>consideration of ethical and social issues</i>					
<i>experimental design</i>					
<i>information retrieval</i>					
<i>laboratory skills</i>					
<i>oral communication</i>					
<i>problem solving</i>					
<i>project planning</i>					
<i>research methodology</i>					
<i>teamwork</i>					
<i>written communication</i>					

**Please say if there was another valuable attribute.**

**Could you now please fill in the last column, this time indicating whether a particular attribute should be present to a greater or lesser extent at the start of their employment, or whether it is about what you require (OK)?**