REFORMULATING FUNDAMENTAL PHYSICS PRACS

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ABSTRACT

The overall goal of this project was to improve the effectiveness of teaching and learning in physics laboratories for students taking Physics Principles and Applications with no previous study in physics. The student body is very diverse, with students enrolled in 27 different degree programs. Interviews with academic staff from the main 'client' areas revealed a wide range of expectations for this subject, with some overlap but considerable variation in the preferred topics to be included. There was much greater agreement between staff in different disciplines regarding the mathematical skills required. Indeed several staff consider that a major benefit of including physics in their program is to develop student skills in numeracy, data analysis, production and interpretation of graphs and the use of basic algebra.

Templates developed in the ASELL project and the work of Kirkup (2009) was used as the basis for redesigning the experiments. Student response to the developments have been positive, as indicated by 80% agreement with the statement 'Overall, as a learning experience, I would rate these labs as good/excellent' and by unsolicited comments in Student Evaluations that the practical component was one of the best aspects of this subject.

REFERENCES

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