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Active Learning in the Third Year Statistical Physics Course at the University of the Witwatersrand

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Active learning techniques were used for the first time in the Statistical Physics module presented to third year students at the University of the Witwatersrand in the first semester of 2009. The reaction of the students, recorded in a formal Student Assessment of Lecturer Performance, administered by the Centre for Teaching and Learning Development at the University, was overwhelmingly positive. In addition, the final results of the students were excellent. This paper reports on the methods employed, the results of the student survey and the course results. These results are compared with the results of the same group of students in the second year Thermal Physics module, taught by the same lecturer using more traditional methods of instruction, during the second semester of 2008. The employment of innovative teaching strategies makes a significant difference to the confidence and attitude of the students, and an increase in the level of performance of the majority of students is apparent. Active learning is now the standard method of instruction in both the second and third year Thermal and Statistical Physics courses, and details of the materials developed over the last three years will be provided.

**Level (Hons, MSc,
 PhD, other)?**

other

**Consider for a student
 award (Yes / No)?**

No

**Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?**

Yes

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