



## SYNOPSIS

The traditional approach to teaching the undergraduate science curriculum is lecture-based and teacher-centred. Whilst this is an effective, albeit antiquated, method of delivering content, it really does little to prepare students to become scientists. Additionally, as information becomes increasingly available, easier to access and more effectively presented, the university lecture will eventually become obsolete. In contrast to the lecture-model, student-centred teaching and active learning methods increase the level of both comprehension and retention of course material and

also develop critical thinking, problem-solving and communication skills. Isn't this exactly what we are trying to achieve in our undergraduate science programmes? Why then aren't more science courses taught using student-centred teaching strategies? This seminar will describe two strategies that we have recently used to teach science courses at UNB-SJ: Team Based Learning® (TBL) and project based learning (PBL). The rationale, course design, implementation, challenges, benefits and outcomes of the courses will be discussed with the objective of answering three key questions: Firstly, what on earth were we thinking? Secondly, would we do it again? Thirdly, how would this approach work in other courses, subjects and/or disciplines?



## BIOGRAPHICAL PROFILE:

### *Dr Christopher Gray*



Christopher Gray was born in Evesham in the Midlands of England and grew up in the west country county of Cornwall. After a calamitous and somewhat misguided attempt to obtain a degree in biochemistry, he obtained a BSc (Hons 1st class) in Marine Chemistry from the University of Wales, Bangor in 1995. Chris then travelled to South Africa to pursue postgraduate research, obtaining an MSc (with distinction) in Zoology and a PhD in organic chemistry from Rhodes University. During this time, he taught a number of chemistry laboratory courses and,

to his surprise, found that this was a fairly agreeable experience. On the completion of his PhD, Chris remained at Rhodes as a postdoctoral fellow and accepted a term appointment as a junior lecturer to expand his teaching experience. In 2004 he travelled to Canada to post-doc with Raymond Andersen at UBC and accepted a faculty position at UNB in 2007 with teaching responsibilities in the areas of organic chemistry and, oddly, biochemistry. Since accepting his position at UNB, Chris has been awarded departmental and faculty teaching awards, the Allan P. Stewart Award for Excellence in Teaching, and is currently a University Teaching Scholar. More importantly, a few students have told him that his teaching is "okay" and he has a chilli pepper on [www.ratemyprofessors.com](http://www.ratemyprofessors.com).



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cordially invites you to attend a

## Public Lecture

# Student-centred teaching in the undergraduate science curriculum: *what were we thinking?*

by

**Dr Christopher Gray**

*University of New Brunswick, Canada*



**Date:** Tuesday, 29 April 2014

**Venue:** Council Chamber, UKZN Pietermaritzburg Campus

**Time:** 14h30-15h30

*Light refreshments will be provided*

**ENQUIRIES:** [frosts@ukzn.ac.za](mailto:frosts@ukzn.ac.za); 031 260 7642

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