

Effective Teaching, Effective Learning in the Quantitative Disciplines

Professional development program

Quality professional development is highly successful in improving the effectiveness of teaching and learning. Mathematics education is a specialised teaching pursuit with its own forms, functions, representations and concepts; as such, it requires its own discipline-specific approach to professional development. Secondary-school research indicates that professional development of teachers is an essential driving factor for improving student achievement in mathematics.

I. Professional development unit (three time-slots)

1st Semester: 12 March 2012–12 July 2012

2nd Semester: 26 July 2012–1 December 2012

Two Semesters: 12 March 2012–1 December 2012

We have produced an accessible, practical and evidence-based unit that is designed specifically for tertiary mathematics teachers. These materials were tested and refined through multiple iterations.

Unit overview

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| 1. Introduction to teaching mathematics | 7. Collecting evidence about teaching |
| 2. Models of mathematics learning | 8. Designing and planning units |
| 3. Planning and designing lessons | 9. Managing units |
| 4. Conducting lessons | 10. Assessing students in units |
| 5. Teaching in-service units | 11. Developing learning communities |
| 6. Assessing students in classes | 12. Evaluating units |

The 12-week unit includes assessment and an online learning community, and is offered online on the AustMS website www.austms.org.au/Professional+Development+Unit. The site is open to everyone. The Assessment and Discussion Board are only open to those taking the unit for credit. Online option allows participants to complete in one or two semesters. Please indicate which you prefer. To do the unit for credit, please register with Jennifer Lai (jennifer.lai@mq.edu.au).

II. Professional development workshop (27–28 September 2012)

The professional development workshop will be held in September 2012 in conjunction with the 56th Annual Meeting of the Australian Mathematical Society at University of Ballarat, Victoria. The workshop is funded by the Australian Learning and Teaching Council (ALTC) and it is free for AustMS members. Participants and facilitators will work in small groups in interactive sessions. The registration details will be announced later.

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