# What Would a Professional Computing Doctorate Look Like?

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## Abstract

UNITEC aspires to be a University of Technology that meets the needs of stakeholders. At present there are two significant gaps in UNITEC's offerings in the Computing and Information Technology area: we have certificates, undergraduate and post graduate diplomas, bachelor's and master's degrees, but no graduate diploma or doctorate. Development of a graduate diploma is well advanced. With more than 100 students enrolled in the Master of Computing programme we can anticipate a strong need for a professional doctorate in computing. We have been working with colleagues in the Graduate School and Academic Development Unit on a possible model for professional doctorates that will meet the growing needs for advanced training in applied research.

## Background

A professional doctorate in computing would meet the needs of Donald Joyce graduates with honours or master's degrees in computing who wish to obtain a doctorate with a strong applied flavour. Students would take an approved selection of courses worth 120 credits and a thesis worth 240 credits.

PhDs in computing are offered at most universities. Our doctorate would be special because of its structure (see below) and applied focus. We have already had approaches from people with appropriate qualifications and experience who have investigated Ph D study and have a strong preference for a professional doctorate programme.

## Possible Structure

One key aspect of professional doctorates is that students are provided with more structure, guidance and formal preparation for their thesis work. The 120 credits for course work is likely to consist of three courses that require the students to examine current issues in professional practice select their research topic, scope the research and identify the appropriate research mehodology write a detailed and extensive critical review of the research literature.

Once the course work is complete, the students are well-placed to conduct research that is applied, focused and relevant to the needs of the profession. These characteristics can also apply to PhD research, but all too often PhD students are not well prepared or focussed and undertake esoteric research that is not widely understood, much less applied to solving problems in the real world.

UNITEC as an institution and the staff teaching on the Master of Computing programme are much more in sympathy with the philosophy of professional doctorates. The structured approach provides a bridge between the profession and academia, and has been shown elsewhere to have a greater likelihood of success.