



University of Pretoria Yearbook 2016

Numerical methods for Civil Engineers 780 (SIK 780)

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| Qualification | Postgraduate |
| Faculty | Faculty of Engineering, Built Environment and Information Technology |
| Module credits | 24.00 |
| Programmes | BEngHons Geotechnical Engineering BEngHons Structural Engineering BEngHons Transportation Engineering BEngHons Water Resources Engineering BScHons Applied Science Applied Science: Geotechnics BScHons Applied Science Applied Science: Structures |
| Prerequisites | No prerequisites. |
| Language of tuition | English |
| Academic organisation | Civil Eng |
| Period of presentation | Year |

Module content

A research term paper will be prepared.

In this course, numerical procedures for solving complex engineering systems with the aid of linear equations, eigenvalue procedures, numerical integration, finite differences analyses, finite elements review, Fourier transformation and optimization will be reviewed and discussed.

Some underlying theory for these numerical algorithms will be demonstrated and applicable and relevant problems associated with the use of these algorithms in the field of Civil Engineering will be covered.

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