

Universiteit van Pretoria Jaarboek 2018

Hiperboliese stelsels differensiaalvergelykings 866 (WTW 866)

Kwalifikasie Nagraads

Fakulteit [Fakulteit Natuur- en Landbouwetenskappe](#)

Modulekrediete 0.00

Voorvereistes Partial differential equations at 3rd-year and hons level; Advanced calculus and Linear algebra

Kontaktyd 1 lesing per week

Onderrigtaal Module word in Engels aangebied

Departement Wiskunde en Toegepaste Wiskunde

Aanbiedingstydperk Semester 1 of Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

*Consult with the Head of the Department of Mathematics and Applied Mathematics about the availability of this master's module in a particular year.

Systems of first order partial differential equations and their relationship to wave phenomena. The course will show that the traditional wave equation is over-rated as study material. More detailed contents: Hyperbolicity of first order systems (linear and nonlinear); characteristic curves and surfaces; domains of influence and dependence; well-posedness of initial and boundary value problems; shock phenomena; numerical calculation of solutions; application to the equations of compressible gas dynamics and Maxwell's equations for electromagnetism.

Die inligting wat hier verskyn, is onderhewig aan verandering en kan na die publikasie van hierdie inligting gewysig word.. Die [Algemene Regulasies \(G Regulasies\)](#) is op alle fakulteite van die Universiteit van Pretoria van toepassing. Dit word vereis dat elke student volkome vertroud met hierdie regulasies sowel as met die inligting vervat in die [Algemene Reëls](#) sal wees. Onkunde betreffende hierdie regulasies en reëls sal nie as 'n verskoning by oortreding daarvan aangebied kan word nie.