



# Universiteit van Pretoria Jaarboek 2017

## Fisiese metaalkunde 700 (NFM 700)

<b>Kwalifikasie</b>	Nagraads
<b>Fakulteit</b>	<a href="#">Fakulteit Ingenieurswese, Bou-omgewing en Inligtingtegnologie</a>
<b>Modulekrediete</b>	30.00
<b>Programme</b>	<a href="#">BIngHons Metallurgiese Ingenieurswese</a> <a href="#">BScHons Toegepaste Wetenskap Metallurgie</a>
<b>Voorvereistes</b>	Geen voorvereistes.
<b>Kontaktyd</b>	48 kontakure per semester
<b>Onderrigtaal</b>	Module word in Engels aangebied
<b>Akademiese organisasie</b>	Materiaalkunde en Metallurgies
<b>Aanbiedingstydperk</b>	Jaar

### Module-inhoud

\*Hierdie inligting is slegs in Engels beskikbaar.

The module deals with the basic understanding of phase transformations in alloys, and its relationship with microstructure and mechanical properties of alloys. Included are transformation processes such as solidification; nucleation, growth and coarsening of precipitates; the use of carbides and intermetallic compounds in steels; static and dynamic re-crystallisation; grain growth and the use of grain boundary engineering; the martensite, bainite and pearlite transformations; thermomechanical processing and some elements of quantitative metallography. The course is practice orientated; the current best fundamental understanding of these transformation processes covered, and its role in engineering application demonstrated. The course is fully documented on CD-ROM from the latest literature and is largely intended for that research student who is embarking on a physical metallurgical research project.

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 vertrouwd 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.