

# 2014

## Afrikaans

Programverteenwoordigers  
Program representatives

## English

### LASERFISIKA (Fisiese)

**Prof EG Rohwer**  
T: 021-808 3372, [egr@sun.ac.za](mailto:egr@sun.ac.za)  
<http://www.laser-research.co.za>

### LASER PHYSICS (Physical)

### KERNFISIKA

**Prof SM Wyngaardt**  
T: 021-808 3379, [shaunmw@sun.ac.za](mailto:shaunmw@sun.ac.za)  
<http://www.sun.ac.za/gamma5>

### NUCLEAR PHYSICS

### STRALINGS- EN GESONDHEIDSFISIKA

**Prof RT Newman**  
T: 021-808 2592, [rnewman@sun.ac.za](mailto:rnewman@sun.ac.za)  
<http://www.sun.ac.za/gamma5>

### RADIATION AND HEALTH PHYSICS

**Toelatingsvereistes:**

- Afrikaans of Engels (Huistaal of Eerste Addisionele Taal) 4
- Wiskunde 6
- Fisiese Wetenskappe 4

**Admission requirements:**

- Afrikaans or English (Home Language or First Additional Language) 4
- Mathematics 6
- Physical Sciences 4

1ste jaar: kurrikulum 5	(140 krediete/credits)	1st year: curriculum 5
Chemie	124(16), 144(16)	Chemistry
Fisika	114(16), 144(16)	Physics
Rekenaarvaardigheid	171(4)	Computer Skills
Rekenaarwetenskap	114(16), 144(16)	Computer Science
Wiskunde	114(16), 144(16)	Mathematics
Wetenskapkommunikasievaardigheid	172(8)	Scientific Communication Skills

of/or

1ste jaar: kurrikulum 6	(140 krediete/credits)	1st year: curriculum 6
Chemie	124(16), 144(16)	Chemistry
Fisika	114(16), 144(16)	Physics
Rekenaarvaardigheid	171(4)	Computer Skills
Toegepaste Wiskunde	144(16)	Applied Mathematics
Wiskunde	114(16), 144(16)	Mathematics
Waarskynlikheidsleer en Statistiek	114(16)	Probability Theory and Statistics
Wetenskapkommunikasievaardigheid	172(8)	Scientific Communication Skills

of/or

1ste jaar: kurrikulum 7	(140 krediete/credits)	1st year: curriculum 7
Fisika	114(16), 144(16)	Physics
Rekenaarvaardigheid	171(4)	Computer Skills
Rekenaarwetenskap	114(16), 144(16)	Computer Science
Wiskunde	114(16), 144(16)	Mathematics
Waarskynlikheidsleer en Statistiek	114(16)	Probability Theory and Statistics
Toegepaste Wiskunde	144(16)	Applied Mathematics
Wetenskapkommunikasievaardigheid	172(8)	Scientific Communication Skills

2de jaar kurrikulum Verpligte modules	(133 krediete/credits) (69 krediete/credits)	2 <sup>nd</sup> year curriculum Compulsory modules
Fisika	224(16), 254(16)	Physics
Wiskunde	214(16), 244(16)	Mathematics
Wetenskaplike Berekening	272(5)	Scientific Computing

### Plus

'n Keuse uit die volgende modules afhangende van die eerstejaarskurrikulum wat gevolg is en met inagneming van watter addisionele hoofvakmodules in die derde jaar gevolg gaan word. **(Let wel:** Indien Fisika 214 en 244 gevolg word, kan daar in derde jaar oorgeskakel word na Teoretiese Fisika.)

A choice from the following modules, depending on the first-year curriculum taken, as well as the additional major subject modules that will be taken in the third year: **(Please note:** A student may, in the third year, change to Theoretical Physics if Physics 214 and 244 have been taken.)

Keusemodules	(64 krediete/credits)	Elective modules
Toegepaste Wiskunde	214(16), 244(16)	Applied Mathematics
Chemie	214(16), 234(16), 254(16), 264(16)	Chemistry
Rekenaarwetenskap	214(16), 244(16)	Computer Science
Fisika	214(16), 244(16)	Physics

3de jaar kurrikulum Opsie 1 Verpligte modules	(69 krediete/credits) Minimum 133, maksimum 141 krediete Minimum 133, maximum 141 credits.	3rd year curriculum Option 1 Compulsory modules
Fisika	314(16), 334(16), 342(8), 352(8), 384(16)	Physics
Wetenskaplike Berekening	372(5)	Scientific Computing

### Plus

'n Keuse van 64 krediete uit die volgende vakke, afhangende van die keusemodules wagt in die tweede jaar gevolg is.

A choice of 64 credits from the following modules, dependent on the choice of modules taken in the second year.

Keusemodules	(64 krediete/credits)	Elective modules
Chemie	314(16), 324(16), 344(16), 364(16)	Chemistry

### of/or

Toegepaste Wiskunde	324(16), 354(16), 364(16)	Applied Mathematics
<b>en/and</b>		
Wiskunde	324(16)	Mathematics

Opsie 2 Verpligte modules	(101 krediete/credits) Minimum 133, maksimum 141 krediete Minimum 133, maximum 141 credits.	Option 2 Compulsory modules
Fisika	314(16), 334(16), 342(8), 344(16), 352(8), 384(16)	Physics
Toegepaste Wiskunde	364(16)	Applied Mathematics
Wetenskaplike Berekening	372(5)	Scientific Computing

### Plus

Keusemodules	(64 krediete/credits)	Elective modules
Fisika	372(8)	Physics
Rekenaarwetenskap	314(16), 315(16), 334(16), 344(16)	Computer Science
Toegepaste Wiskunde	324(16), 354(16)	Applied Mathematics
Wiskunde	314(16), 324(16), 325(16), 365(16), 378(32)	Mathematics

<b>Opsie 3</b> Verpligte modules	(101 krediete/credits) Minimum 133, maksimum 141 krediete Minimum 133, maximum 141 credits.	<b>Option 3</b> Compulsory modules
Fisika	314(16), 334(16), 342(8), 344(16), 352(8)	Physics
Wetenskaplike Berekening	372(5)	Scientific Computing
Wiskunde	314(16), 324(16), 344(16), 365(16), <b>of/or</b> 314(16), 324(16), 378(32)	Mathematics

**Let wel:**

- **Opsie 1** lei na 'n honneursprogram in Fisika en ook na 'n honneursprogram in Chemie of in Toegepaste Wiskunde.
- **Opsie 2** lei na 'n honneursprogram in Fisika en ook na 'n honneursprogram in Fisiese en Wiskundige Analise (FWA).
- **Opsie 3** lei na 'n honneursprogram in Fisiese en Wiskundige Analise (FWA) en ook na 'n honneursprogram in Wiskunde.

**Please note:**

- **Option 1** leads to an honours programme in Physics and also to an honours degree programme in Applied Mathematics or in Chemistry.
- **Option 2** leads to an honours programme in Physics and also to an honours degree programme in Physical and Mathematical Analysis.
- **Option 3** leads to an honours programme in Physical and Mathematical Analysis and also to an honours degree programme in Mathematics.