59420-152 (6) Physics for Engineering Students (3T)
2016

Course summary:

Introduction to basic relativity and basic quantum mechanics. Continued study of waves, acoustics and optics based on Engineering Physics 113.

Flexible Assessment
P Engineering Physics 113

Outcomes of course:

This module will introduce you to the modern developments in physics, which is also relevant to the engineering environment.

Lecturer:

Prof S Wyngaardt
Telephone number: 021 808 3379
E-mail address: shaunmw@sun.ac.za
Office: Room 1018 in the Merensky Physics Building

Mentor:

The Department of Physics has appointed a staff member as mentor for each year of its physics programme to be available to students for consultation. Students should feel free to discuss general issues related to the physics programme or specific modules in the programme with the relevant mentor, in addition to usual consultations with their individual lecturers of modules.

The mentor for the first year programme and its modules is Dr GW Bosman gwb@sun.ac.za

Course content:

Topics covered in the course includes special relativity, an introduction to the principles of quantum mechanics, basics introduction to nuclear and particle physics

Practical (Tutorials):

Tutorials will occur each week. During the tutorial sessions students have the opportunity to solve problems related to the course work and to participate in other activities to enhance their understanding of the content covered during the lectures. During each tutorial session students should expect to produce work that will contribute to their class mark. The nature of assignments and assessments will be varied.

Study material:

Prescribed textbook: "Engineering Physics: Engineering Physics 113 and Engineering Physics 152" (Wiley Custom)

Learning opportunities:

Formal lectures, classroom discussions of relevant physics topics

Assessment:

Methods of Assessments
Tutorial assignments will contribute 30 – 50 % of the class mark. One class test will be written during the semester and will contribute 50 - 70% to the class mark.

Venue and time of assessment opportunities
Class test: To be confirmed
  Date: See timetable
  Time: To be confirmed
  Venue: To be confirmed

Calculation of class mark:
Class mark = 30-50% (assignments) + 50-70% (class test)

Calculation of final mark for the module:
Final mark = 40% (class mark) + 60% (examination)

Admission to examination:
A class mark of at least 40% should be attained in order to qualify for the exam at the end of the year.