

## Mathematics Refresher Course

Information electronically available at (<https://goo.gl/FQhbQ6> )

### *What is the motivation for the refresher course?*

The lecturers at the NWU are continually attempting to improve their service to students. During recent years students have experienced escalating problems with the transition from school to university, especially concerning Mathematics. The School for Mathematical Sciences has decided that from 2011 the refresher course in mathematics will be compulsory for main stream mathematics students.

### *Who must attend the refresher course?*

All bona fide first year students enrolled for programs which contain the module MTHS111, MTHS114, MATH111 or WSKT122 must attend the refresher course. This implies that all engineering and BMI students, BSc and BA students enrolled for the modules MTHS111 or MTHS114 and BEd students (Snr/FET) with Education Mathematics as mayor subject or Technology Education, have to attend. See the enclosed list of programs that contain the modules MTHS111, MTHS114, MATH111 or WSKT122. Students who are repeating the modules MTHS111, MTHS114, MATH111 or WSKT122, BCom students enrolled for MTHS112/123, and BSc students enrolled for MTHS113, are exempted from the refresher course. Students repeating the module MTHS111, MTHS114 or MATH111 are strongly recommended to attend the refresher course.

### *When is the refresher course presented?*

The refresher course is presented during the R&O-period with the consent and cooperation of the student dean and the members of the HC's of the various hostels. Please note that the dates chosen for the refresher course will not coincide with important activities during the R&O-period. The course will be presented in the lecture halls of E8 (J Chris Coetzee building), Potchefstroom campus, NWU and the exact dates and time will be announced as soon as it is available.

### *What study material is needed for the course*

At the beginning of the course every student registered for the Refresher Course will receive a dedicated workbook with space to write on. The workbook will also be made available electronically for students who want to use a tablet.

### *What is the cost of the refresher course?*

The fees for the refresher course are R450 and include the cost of the workbook. The amount will be added to the relevant student accounts.

### *Which topics will be addressed in the refresher course?*

The following topics will be addressed: solving exponential and logarithmic equations, solving trigonometric equations in radians, absolute value function, limits and continuity and graphs of polynomials and rational functions.

### *Who are exempted from the refresher course?*

Only students who obtain 80% or more in a pre-test written on the first day of the course are exempted from the course. All other students are compelled to attend the refresher course. The test will be written during the Registration and Orientation Period in the lecture halls of E8 (J Chris Coetzee building), Potchefstroom campus, NWU. All students have to report at the foyer of E8 (J Chris Coetzee building). Bring a HB pencil and rubber with (calculator is optional). In the test certain basic mathematical ideas/concepts which were taught at school and which are important for Mathematics at university level, are tested. No specific preparation for the test is necessary.

### *What else can be done to prepare for Mathematics at university level?*

We recommend two books/sites for students who want to prepare for university mathematics during the December holidays. A workbook titled *Unimaths Intro workbook* by Christopher Mills (ISBN 978-1-920663-01-8) is available at most academic book shops. It covers all new mathematical topics learned at university in the first year and will serve as a guide during your first year. A mathematics survival guide, *Math Review Manual* of McMaster University is electronically available at <http://ms.mcmaster.ca/lovric/rm.html>. This guide will help you to be better prepared for Mathematics at university level and is very handy to consult during your first year; especially the introductory part.

### *Who may I contact for any further information?*

Natural Sciences, Engineering and Economics  
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Education  
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Students admitted to the following programs have to attend the refresher course:

- Faculty of Engineering (ASA Ingenium) (E8 G42, English E8 G34)
  - Chemistry (7CG K01 - I421P)
  - Chemistry en Mineral Processing (7CG K02 - I422P)
  - Electrical en Electronics (7CN K01 - I423P)
  - Computer en Electronics (7CH K01 - I424P)
  - Electromechanical (7CL K01 - I425P)
  - Mechanical (7CJ K01 - I426P)
  - Industrial (7CK K01 - I427P)
- Faculty of Natural Sciences
  - ASA Scientae E8 G01, English E8 G34
    - Chemistry and Physics (2FF H05 - N301P)
    - Chemistry, Mathematics and Applied Mathematics (2FF H22 - N301P)
    - Physics and Mathematics (2FF H23 - N301P)
    - Physics and Applied Mathematics (2FF H24 - N301P)
    - Physics and Computer Science (2FF H25 - N301P)
    - Computer Science and Statistics (2FF H26 - N301P)
    - Computer Science and Mathematics (2FF H09 - N301P)
    - Computer Science and Economics (2FF H28 - N301P)
    - Mathematics and Economics (2FF H29 - N301P)
    - Geography and Applied Mathematics (2FF H30 - N301P)
    - Statistics and Mathematics (2FG H02 - N301P)
    - Mathematics (2FG H01 - N301P)
    - Quantitative Risk Management (2FT H01 - N301P)
    - Financial Mathematics (2FS H01 - N301P)
    - Business Analytics (2FR H01 - N301P)
    - Actuarial Science (2FQ H01 - N301P)
    - Information Technology and Computer Science (2DX H01 N302P) if MTHS111 is elected
  - ASA Ad Vivendum (E8 K41, English E8 G34)
    - Biochemistry and Chemistry (2FF H06 - N301P)
    - Microbiology and Biochemistry (2DK H11 - N301P)
    - Botany and Biochemistry (2DK H02 - N302P)
    - Zoology and Biochemistry (2DK H07 - N302P)
    - Chemistry and Physiology (2DK H06 - N302P)
    - Microbiology and Chemistry (2DJ H10 - N301P)
    - Botany and Chemistry (2DJ H03 - N302P)
    - Zoology and Chemistry (2DJ H04 - N302P)
    - Geology and Chemistry (2DJ H07 - N302P)
    - Geography and Computer Science (2DJ H14 - N301P)
  - ASA PSA (E8 K40, English E8 G34)
    - Urban and Regional Planning (2FE K01 - N401P)
- Faculty of Health Sciences (ASA Viviente) (E8 K40, English E8 G34)
  - Physiology and Biochemistry (8DJ H01 - G301P)
- Faculty of Arts (ASA Cuvinte) (E8 G01, English E8 G34)
  - Any BA with Mathematics as elective
- Faculty of Education Sciences (ASA Educo) (E8 G41, English E8 G34)
  - BEd Snr/FET with Mathematics as a specialisation subject (4BN J01/03/04/07/08/13/14)
  - BEd Snr/FET Mechanical, Electrical and Civil Technology education (4BN J17/18/19)
- Students appointed by the Admission office or Faculty Manager to attend the course for possible admission (E8 K40, English E8 G34)