Mathematics Refresher Course

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 WISN111 or MATE111 must attend the refresher course. This implies that all engineering and BMI students, but only BSc, BCom, BA students enrolled for the module WISN111 and BEd students with Education Mathematics as mayor subject, have to attend. Students who are repeating the module WISN111, BCom students enrolled for WISN112/123, and BSc students enrolled for WISN113, are exempted from the refresher course. See the attached list of programs that contain the module WISN111 or MATE111.

When is the refresher course presented?

The refresher course is presented during the "O&B" 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 "O&B" period. The course date will be announced as soon as it is available.

What is the cost of the refresher course?

The fees for the refresher course are R400 and include the cost of the study material. The amount will be added to the relevant student accounts. The study material will be distributed during the registration period.

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, rules of differentiation, and graphs of polynomials and rational functions. The 2012 workbook that was used during the 2012 Refresher course is available electronically on the internet. It can be downloaded and worked through beforehand. Any of the persons below may be contacted and they will send you the workbook electronically.

Who are exempted from the refresher course?

Before the commencement of the refresher course, during the "O&B" period, a Mathematics test will be written by all students enrolled for programmes in the attached list. The test date will be announced as soon as it is available. All students have to report at the foyer of G1 (Natural Sciences 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. All students that attain 80% or more in the test are exempted from the course. All other students are compelled to attend the refresher course.

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

A **survival guide** (Math Review Manual of McMaster University) is available electronically on the internet. It can be downloaded and worked through beforehand. Any of the persons below may be contacted and they will send you the workbook electronically. This guide will help you to be better prepared for Mathematics at university level and is very handy to have close by during the year. Specifically, read the introductory part.

Who may I contact for any further information?

Annalie Roux annalie.roux@nwu.ac.za of 018 2991895
Elsabe Weyer elsabe.weyer@nwu.ac.za of 018 2994370
Heleen Coetzee heleen.coetzee@nwu.ac.za of 018 2991471
Mariana Plotz mariana.plotz@nwu.ac.za of 018 2994304
Mariette Hitge mariette.hitge@nwu.ac.za of 018 2992579
Rudi van de Venter rudi.vandeventer@nwu.ac.za of 0182991859
Sonica Froneman sonica.froneman@nwu.ac.za of 018 2992334
Trudie Benade trudie.benadie@nwu.ac.za of 018 2992300

Students admitted to the following programs have to attend the refresher course:

- Faculty of Engineering (I103P, I104P, I203P, I204P, I303P)
- Faculty of Natural Sciences
    - Physical and Chemical Sciences
        - Chemistry and Physics (N151P)
        - Chemistry, Mathematics and Applied Mathematics (N152P)
        - Physics and Mathematics (N154P)
        - Physics and Applied Mathematics (N155P)
        - Biochemistry and Chemistry (N174P)
        - Biochemistry and Physiology (N179P)
    - Computer and Mathematical Sciences
        - Physics and Computer Science (N153P)
        - Computer Science and Statistics (N156P)
        - Computer Science and Mathematics (N157P)
        - Statistics and Mathematics (N158P)
        - Mathematics (N159P)
        - Computer Science and Economics (N175P)
        - Mathematics and Economics (N176P)
        - Information Technology and Computer Science (N150P)
    - Environment- and Biological Sciences
        - Botany and Chemistry (N149P)
        - Zoology and Biochemistry (N160P)
        - Zoology and Chemistry (N161P)
        - Microbiology and Biochemistry (N167P)
        - Microbiology and Chemistry (N168P)
        - Botany and Biochemistry (N170P)
        - Geology and Chemistry (N180P)
    - BWI
        - Quantitative Risk Management (N134P)
        - Financial Mathematics (N135P)
        - Data mining (N136P)
        - Actuarial Science (N137P)
    - Urban and Regional Planning (N183P)
- Faculty of Health Sciences
    - Physiology and Biochemistry (G301P)
    - Physiology and Chemistry (G302P)
    - Psychology and Computer and Information Systems (G305P)
    - Psychology and Mathematics (G306P)
- Faculty of Arts
    - Philosophy and Mathematics (L328P)
    - Language technology met Computer Science (L425P)
    - Music with Mathematics as choice (L416P)
- Faculty of Economical Sciences
    - Economics, Risk management and Investment management (E342P)
- Faculty of Education Sciences
    - BEd Snr/FET Mathematics for Education (O194P)
    - BEd Int/Snr Mathematics for Education (O194P)
- Students appointed by the Admission office or Faculty Manager to attend the course for possible admission.