

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 or MATH111 must attend the refresher course. This implies that all engineering and BMI students, but only BSc, BCom, BA students enrolled for the module MTHS111 or MTHS114 and BEd students with Education Mathematics as mayor subject, have to attend. See the attached list of programs that contain the module MTHS111 or MATH111.

Students who are repeating the module MTHS111 and MTHS114, BCom students enrolled for MTHS112/123, and BSc students enrolled for MTHS113, are exempted from the refresher course. Students repeating the module MTHS111 or MTHS114 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 start 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?

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

- Faculty of Engineering (I103P, I104P, I203P, I204P, I205P, I303P, I304P)
- 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)
 - Chemistry and Physiology (N177P)
 - 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)
 - Information technology and computer science (N150P) if MTHS111 is taken
- Faculty of Health Sciences
 - Physiology and Biochemistry (G301P)
 - Psychology and Computer and Information Systems (G305P)
 - Psychology and Mathematics (G306P)
- Faculty of Arts
 - Mathematics and History (L329P)
 - Ethics, Philosophy and Mathematics (L338P)
 - Language Technology with Computer Science (L425P)
 - Any BA with Mathematics as choice
- Faculty of Economical Sciences
 - Economics, Risk management and Investment management (E342P)
- Faculty of Education Sciences
 - BEd Snr/FET Mathematics for Education (O194P)
- Students appointed by the Admission office or Faculty Manager to attend the course for possible admission.