It all starts here ®

WHAT YOU NEED TO KNOW ABOUT MATHEMATICS, MATHEMATICAL LITERACY, AND TECHNICAL MATHEMATICS

Each Mathematics subject has a different focus, develops different skills, and can influence your study, career, and future options. The good news is that, with the right information, you can make the best choice for your path!

1 HOW DO THE THREE SUBJECTS DIFFER?

	Mathematics	Mathematical Literacy	Technical Mathematics
Focus	• Abstract and theoretical mathematics. • Algebra, Geometry, Trigonometry, Functions, Calculus, Probability, Statistics, Finance and Patterns.	• Applying mathematics in everyday life. • Making informed decisions. • Interpreting information and solving real-world problems.	• Applying the science of mathematics to the technical and vocational fields. • Emphasis on practical application rather than abstract theory.
Skills	Develop **problem-solving, logical reasoning, and analytical thinking** skills.	Develop **practical reasoning, problem-solving** and **interpretation skills.**	Develop **problem-solving, spatial reasoning, measurement** and **technical thinking** skills.
Difficulty	Higher level of mathematical difficulty.	Less complex than Mathematics.	Moderate to high, depending on the topic and learner.
Suitable for	Best suited for learners interested in **science, engineering, technology** and **commerce** fields.	Best suited for learners whose career paths do not require **advanced** mathematics.	Best suited for learners interested in **manufacturing, construction and technical trades.**

2 WHAT WILL YOU LEARN?

Mathematics	Mathematical Literacy	Technical Mathematics
• Algebra • Geometry • Trigonometry • Statistics • Functions and Graphs • Calculus • Finance • Patterns and Sequences	• Budgeting • Banking • Measurement • Maps and Plans • Data Handling • Probability • Numbers and Calculations • Patterns and Relationships	• Technical Calculations • Formulae • Equations • Applied Algebra • Measurement • Practical Mathematics • Technical Graphs and Applications

3 CAREER PATHWAYS

Mathematics	Mathematical Literacy	Technical Mathematics
• Engineering • Health Sciences • Computer Science • Architecture • Data Science • Accounting • Actuarial Science • Information Technology	• Tourism and Hospitality • Consumer studies • Human Resources • Education • Marketing • Community Development & Social Work • Law • Management and related fields	• Technical Apprenticeships • Construction • Manufacturing • Electrical Trades • Automotive fields • Mechanical Technology • Technical Fields • Software Developer

Please note:
Career pathways differ depending on the specific programme and its admission requirements.

4 MATHEMATICS REQUIREMENTS AT NWU

At the NWU, admission requirements differ depending on the programme you want to study. Some programmes require specific **Mathematics level,** while others may accept **Mathematical Literacy** or **Technical Mathematics.**

For programmes that require **Mathematics,** the following achievement levels are commonly used:

Mathematics Level	Achievement percentage
Level 4	50-59%
Level 5	60-69%
Level 6	70-79%
Level 7	80-100%

Please note:
- It's easier to change from **Mathematics** to **Mathematical Literacy** than the other way around.
- If you're taking **Mathematical Literacy** or **Technical Mathematics,** you'll need higher marks to get into certain study programmes than if you're doing pure Mathematics.

5 MATHEMATICS MISCONCEPTIONS: Let's clear them up

*"**Mathematical Literacy** is easy"*	**Not necessarily**, **Mathematical Literacy** still requires hard work, problem-solving, interpretation of information and application of **mathematical concepts.**
*"I can study anything with **Mathematical Literacy**"*	**No.** Many university programmes specifically require **Mathematics** and will not accept **Mathematical Literacy** as a substitute.
"I should choose ***Mathematics*** *because my friends are choosing it or my parents insist"*	**Choose Mathematics** based on your strengths, interests, capacity and willingness to work hard.
***"Mathematics** is only for smart people"*	**No.** Anyone can improve their **Mathematics skills**. Success in **Mathematics** is not only about being naturally gifted, but it also comes from practice, commitment, asking for help and developing confidence.
***"Choosing Mathematics** means I will automatically get into any course"*	**Not necessarily.** Performing well in **Mathematics** can open a wider range of study options. However, choosing **Mathematics** only helps if you can achieve the admission requirements of the programme you eventually want to study. **University admissions** depend on your final grade 12 results, APS, and requirements of your chosen programme.

ADVICE FOR LEARNERS

1. Want the widest range of study and career options? Choose **MATHEMATICS.**
2. Prefer practical, everyday applications of mathematics? **MATHEMATICAL LITERACY** may be the right choice.
3. Interested in technical fields, or skilled trades? **TECHNICAL MATHEMATICS** may be the right choice.

Remember: Your subject choice should be based on **your interests, strengths, career goals and the admission requirements of the programmes you may want to study.**

Choose Wisely. Shape Your Future.

Please review the campaign webpage:
https://studies.nwu.ac.za/studies/grade-9-subject-choices

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