Course Title:	**Algebra and Discrete Mathematics**
Course Code:	**MATH502**
Descriptor Start Date:	**31/01/2025**
Descriptor End Date:	**13/07/2025**
POINTS:	**15.00**
LEVEL:	**5**
PREREQUISITE/S:	**None**
COREQUISITE/S:	**None**
RESTRICTION/S:	**None**

LEARNING HOURS

Hours may include lectures, tutorials, online forums, laboratories. Refer to your timetable and course information in Canvas for detailed information.

Total learning hours: 150

PRESCRIPTOR

Gives the student a solid foundation in algebra and discrete mathematics, providing essential background for further study in many fields of Science and Engineering, particularly those utilizing ideas from Mathematics or Computer Science.

LEARNING OUTCOMES

1. Apply rigorous thinking to analyse problems and prove simple mathematical results.
2. Apply basic set theory.
3. Calculate and interpret relations and functions.
4. Perform matrix algebra.
5. Apply basic linear algebra to solve systems of linear equations.

CONTENT

- Logic,
- Mathematical proofs,
- Sets, relations and functions,
- Matrices,
- Systems of linear equations.

LEARNING & TEACHING STRATEGIES

Lectures
Tutorials

ASSESSMENT PLAN

Assessment Event	Weighting %	Learning Outcomes
Assignment 1	20.00	1, 2, 3, 4, 5
Assignment 2	20.00	1, 2, 3, 4, 5
Mid-Semester Test	20.00	1,2,3
Final Exam	40.00	1, 2, 3, 4, 5

Grade Map **MAP1**

A+ A A- Pass with Distinction
B+ B B- Pass with Merit
C+ C C- Pass
D Fail

Overall requirement/s to pass the course:

To pass this course, students must attempt all summative assessments and achieve a minimum overall grade of C-.

LEARNING RESOURCES

Ross and Wright Discrete Mathematics for New Technologies (Prentice-Hall 4th edition); Anton Elementary Linear Algebra (Wiley 7th edition).

For further information, contact: Te Ara Auaha - Faculty of Design & Creative Technologies

Principal Programme:	**DJ1041, Bachelor of Science**
Related Programme/s:	**AK1271** **AK1301** **AK1302** **AK2040** **AK3001** **AK3750** **DJ1042** **DJ1043** **HA1041** **HA1042** **HA1043** **ICE1** **INEXCH1** **SABRD1**