

MAT1000 - Introductory Mathematics

Lecturer: Dr. J. L. Borg

Credit value: 5

Lectures: 35

Method of assessment: Examination (Duration: 2 hours)

Assessment session: January

Topics

1. Mathematical Logic and Proofs
2. Set Theory, Relations and Functions
3. Number systems :
 - Integers
 - Rational numbers
 - Real numbers
4. Cardinality, Countability and Infinity

Suggested Reading

- D'Angelo J.P. and West D.B., *Mathematical Thinking: Problem-Solving and Proofs*, Prentice Hall, 2nd Edition, 2000. (**recommended text**)
- Daepf, U. and Gorkin, P., *Reading, Writing, and Proving: A Closer Look at Mathematics*, Springer, 2nd Edition, 2011. (**recommended text**)
- Schumacher C., *Chapter Zero: Fundamental Notions of Abstract Mathematics*, Addison-Wesley, 2nd Edition, 2000.
- Devlin K.J., *Sets, Functions and Logic*, Chapman and Hall, 3rd Edition, 2003.
- Epp S., *Discrete Mathematics with Applications*, Brooks Cole, 4th Edition, 2010.