Pre-requisites guide for first-year courses

LANGUAGES AND CULTURES

All languages can be started from an introductory level. In some cases, students who have prior knowledge, or have studied to Level 3, may be able to start with more advanced courses.

CRIMINOLOGY

Course	Pre-requisites
CRIM 111 Introduction to Criminology	20 ANTH, HIST, LAWS, MDIA, PUBL, SOSC or SPOL points or 15 PSYC points.

MUSIC

Course	Pre-requisites
MUSC 164 Jazz Theory 1	Approved theory qualification or entrance test, or B or better in MUSC 160.
MUSC 166 Music Theory and Musicianship 1	Approved theory qualification or entrance test, or B or better in MUSC 160 or equivalent.
MUSC 167 Music Theory and Musicianship 2	MUSC 166 Music Theory and Musicianship 1
CMPO 101 Introduction to Composition, Sonic Arts and Film Scoring	For entry requirements, visit our website.
CMPO 130 Introduction to Writing for Orchestral Instruments	For entry requirements, visit our website.
PERF 101 Performance Principal Study 1A* PERF 101 Performance Principal Study 1A* PERF 105* PERF 106*	Audition. *Subject to regulatory approval*

CHEMISTRY

Course	Pre-requisites
CHEM 113 Concepts of Chemistry	Although CHEM 113 is an open entry course, is not an introductory course. It assumes a knowledge of the basic ideas of chemistry at a level similar to NCEA Level 2 Chemistry or CHEM 191 Introduction to Chemistry. Students without any chemistry background can succeed in this course but will need to allow extra time to develop their ideas.
CHEM 114 Principles of Chemistry	Acceptance into CHEM 114 is conditional on a minimum of 18 NCEA Level 3 credits in Chemistry including: • 3.4 Thermochemistry and Structure Bonding (AS91390) • 3.5 Organic Chemistry (AS91391) • 3.5 Equilibria in Aqueous Systems (AS91392) Acceptance into CHEM 114 is conditional on a minimum of D or better in Chemistry in the the A level Cambridge International Examinations. Acceptance into CHEM 114 is conditional on a minimum of 4 or better on the International Baccalaureate grade scale in HL Chemistry. or, an equivalent background in Chemistry or CHEM 113.

COMPUTER SCIENCE AND ENGINEERING

Course	Pre-requisites
CGRA 151 Introduction to Computer Graphics	COMP 102 or COMP 112 or DSDN 142; 15 pts from (ENGR 121, MATH 100-199) or 16 AS credits NCEA Level 3 mathematics (or equivalent).
COMP 112 Introduction to Computer Systems	14 NCEA Level 3 credits in Digital Technology including 6 credits in Computer Programming, or COMP 103, or INFO 102 or equivalent programming experience.
ENGR 121 Engineering Mathematics Foundations	Acceptance into ENGR 121 is conditional on a minimum of 16 NCEA Level 3 credits in Mathematics, or completion of MATH 132 (or equivalent background). Acceptance into ENGR 121 is conditional on minimum of a D grade or better in the A Level Mathematics or a B grade or better in the AS Level Mathematics Cambridge International Examinations. Acceptance into ENGR 121 is conditional on a minimum of 4 or better on the International Baccalaureate grade scale in HL Mathematics.
ENGR 141 Engineering Science	Acceptance into ENGR 141 is conditional on a minimum of 16 NCEA Level 3 credits in Mathematics, or completion of MATH 132 (or equivalent background). Acceptance into ENGR 141 is conditional on minimum of a D grade or better in the A Level Mathematics or a B grade or better in the AS Level Mathematics Cambridge International Examinations. Acceptance into ENGR 141 is conditional on a minimum of 4 or better on the International Baccalaureate grade scale in HL Mathematics.
ENGR 142 Engineering Physics for Electronics and Computer Systems	Acceptance into ENGR 142 is conditional on a minimum of 18 NCEA Level 3 achievement standard credits in Physics including: • 3.4 Mechanical Systems (AS9151524) and, • 3.6 Electrical Systems (AS91526) and either • 3.3 Wave Systems (AS91526) or • 3.1 Practical Investigation (AS91521) And at least 12 NCEA Level 3 credits in Mathematics including: • 3.6 Differentiation (AS91578) • 3.7 Integration (AS91579) Acceptance into ENGR 142 is conditional on a minimum of D or better in both Physics and Mathematics in the AS level Cambridge International Examinations. Acceptance into ENGR 142 is conditional on a minimum of 4 or better on the International Baccalaureate grade scale in both Physics and Mathematics. or successful completion of MATH 141 and PHYS 131.

MATHEMATICS AND STATISTICS

Course	Pre-requisites
MATH 141 Calculus 1A	Acceptance into MATH 141 is conditional on a minimum of 16 NCEA Level 3 achievement standard credits in Mathematics. Acceptance into MATH 141 is conditional on a minimum of D or better in Mathematics in the A level Cambridge International Examinations or a B or better in Mathematics in the AS level Cambridge International Examinations. Acceptance into MATH 141 is conditional on a minimum of 4 or better in Mathematics on the International Baccalaureate grade scale. or successful completion of MATH 132.
MATH 142 Calculus 1B	For direct entry in MATH 142, students need to have successfully completed the following achievement standards in Mathematics: • 3.6 Differentiation (AS91578) with excellence • 3.7 Integration (AS91579) with merit or excellence and one of the following with merit or excellence: • 3.1 Conics (AS91573), • 3.3 Trigonometry (AS91575) or • 3.5 Algebra (AS91577). Acceptance into MATH 142 is conditional on a minimum of C or better in Mathematics in the A Level Cambridge International Examinations or a B or better in Mathematics, including P2 pure Mathematics in the AS Level Cambridge International Examinations. Acceptance into MATH 142 is conditional on a minimum of 6 or better in Mathematics on the International Baccalaureate grade scale. Or successful completion of MATH 141 or QUAN 111.
MATH 151 Algebra	For direct entry into MATH 151, students need to have passed 16 NCEA Level 3 achievement standard credits in Mathematics. Acceptance into MATH 142 is conditional on a minimum of D or better in Mathematics in the A Level Cambridge International Examinations or a B or better in Mathematics in the AS Level Cambridge International Examinations. Acceptance into MATH 142 is conditional on a minimum or 4 or better in Mathematics on the International Baccalaureate grade scale. Or successful completion of MATH 141 or QUAN 111.

MATH 161 Discrete Mathematics and Logic	For direct entry into MATH 161, students need to have passed 16 NCEA Level 3 achievement standard credits in Mathematics, with one of the following achieved with merit or excellence: • 3.5 Complex numbers (AS91577) • 3.6 Differentiation (AS91578) • 3.7 Integration (AS91579) Acceptance into MATH 161 is conditional on a minimum of D or better in Mathematics in the A Level Cambridge International Examinations or a B or better in Mathematics in the AS Level Cambridge International Examinations. Acceptance into MATH 161 is conditional on a minimum of 4 or better in Mathematics on the International Baccalaureate grade scale. Or successful completion of one of the following courses: ENGR 121, ENGR 123, MATH 141-177, QUAN 111 or a B+ or better in MATH 132.
MATH 177 Probability and Decision Modelling	For direct entry into MATH 177, students need to have passed 16 NCEA Level 3 achievement standard credits in Mathematics including: • 3.6 Differentiation (AS91578) • 3.7 Integration (AS91579). Acceptance into MATH 177 is conditional on a minimum of D or better in Mathematics in the A Level Cambridge International Examinations or a B or better in Mathematics at AS Level Cambridge International Examinations. Acceptance into MATH 177 is conditional on a minimum of 4 or better in Mathematics on the International Baccalaureate grade scale.

PHYSICS

Course	Pre-requisites
PHYS 114 Physics 1A PHYS 115 Physics 1B	Acceptance into PHYS 114 is conditional on a minimum of 14 NCEA Level 3 credits in Physics, and 14 Level 3 credits in Mathematics, including: • 3.6 Differentiation (AS91578) • 3.7 Integration (AS91579). Note: 18 NCEA Level 3 credits in both Mathematics and Physics are recommended. or one of the following: • one externally assessed standard with Excellence in both NCEA Level 3 Mathematics and Physics or two externally assessed standards with Merit in both NCEA Level 3 Mathematics and Physics. • two externally assessed standards with Excellence in NCEA Level 3 Calculus • an equivalent background in Mathematics or Physics. Acceptance into PHYS 114 is conditional on a minimum of D at A level or A at AS level (or better) in both Physics and Mathematics in the A level Cambridge International Examinations. Acceptance into PHYS 114 is conditional on a minimum of 4 at HL or 6 at SL (or better) on the International Baccalaureate grade scale in both Physics and Mathematics.