

Mathematics: Associate of Science Degree

Faculty of Science and Horticulture	kpu.ca/science
Mathematics	kpu.ca/mathematics
Implementation Date	01-Sep-2015
Start Date(s)	September January May
Intake Type	Open intake
Instructional Cycle	Semester-based
Program Type	Undergraduate
Credential Granted	Associate Degree
Offered At	Richmond Surrey
Format	Full-time Part-time
How to Apply	www.kpu.ca/admission

DESCRIPTION

The Associate Degree is designed to provide an educational experience that prepares students for work, citizenship and an enriched life as an educated person, and to lay a solid foundation for further study in the field of Mathematics.

ADMISSION REQUIREMENTS

The Faculty's Admission Requirements, which consist of KPU's undergraduate English Proficiency Requirement, apply to this program.

CURRICULAR REQUIREMENTS

Within the framework of the Associate of Science degree, students must complete at least 60 credits with a minimum overall GPA of 2.0 and a minimum passing grade (D or better) in each course:

English Requirements

ENGL 1100 Introduction to University Writing 3 credits

And one additional first-year ENGL course. 3 credits

First Year Science Requirements

CPSC 1103 Introduction to Computer Programming I 3 credits

One of:

MATH 1120 Differential Calculus 3 credits

MATH 1130 Calculus for Life Sciences I 3 credits

MATH 1140 Calculus I (Business Applications) 3 credits

One of:

MATH 1220 Integral Calculus 3 credits

MATH 1230 Calculus for Life Sciences II 3 credits

One of:

PHYS 1101 Physics for Life Sciences I 4 credits

PHYS 1120 Physics for Physical and Applied Sciences I 4 credits

And four more first-year science courses from the following:

ASTR 1120 Introduction to Astrophysics 4 credits

ASTR 2101 Astrophysics I: Stellar Astrophysics 3 credits

ASTR 2102 Astrophysics II: Galactic Astronomy 3 credits

BIOL 1110 Introductory Biology I 4 credits

BIOL 1210 Introductory Biology II 4 credits

CHEM 1105* Introductory Chemistry 4 credits

CHEM 1110 The Structure of Matter 4 credits

CHEM 1210 Chemical Energetics and Dynamics 4 credits

CPSC 1100 Introduction to Computer Literacy 3 credits

CPSC 1204 Introduction to Computer Programming II 3 credits

CPSC 1250 Introduction to Computer Design 3 credits

GEOG 1110 Atmospheric Science 3 credits

GEOG 1120 Earth Science 3 credits

MATH 1112* Pre-Calculus Algebra 3 credits

MATH 1115† Statistics I 3 credits

MATH 1152 Matrix Algebra for Engineers 3 credits

MATH 2721 Complex Numbers and Linear Algebra 3 credits

PHYS 1100* Introductory Physics 4 credits

PHYS 1102 Physics for Life Sciences II 4 credits

or

PHYS 1220 Physics for Physical and Applied Sciences II 4 credits

PHYS 1170 Mechanics I 3 credits

Second Year Science Requirements

One of:

MATH 2321 Multivariate Calculus (Calculus III) 3 credits

MATH 2821 Multivariate and Vector Calculus 3 credits

Three second-year Math courses chosen from:

MATH 2232 Linear Algebra 3 credits

MATH 2315 Probability and Statistics 3 credits

MATH 2321 Multivariate Calculus (Calculus III) 3 credits

MATH 2335† Statistics for Life Sciences 3 credits

or

4 credits

MATH 2341†	Introduction to Statistics for Business	
MATH 2410	Discrete Mathematics	3 credits
MATH 3322	Vector Calculus (Calculus IV)	3 credits
MATH 3421	Ordinary Differential Equations	3 credits

Two more second-year science courses chosen from:

BIOL 2320	Genetics	4 credits
BIOL 2321	Cell Biology	4 credits
BIOL 2322	Ecology	4 credits
BIOL 2330	Microbiology	4 credits
BIOL 2421	Cellular Biochemistry	3 credits
CHEM 2311	Physical Chemistry for Life Sciences	3 credits
or		4 credits
CHEM 3310	Physical Chemistry	
CHEM 2315	Analytical Chemistry	4 credits
CHEM 2320	Organic Chemistry I	4 credits
CHEM 2420	Organic Chemistry II	4 credits
CPSC 2302	Data Structures and Program Organization	3 credits
CPSC 2405	Introduction to Discrete Mathematics I	3 credits
ENVI 2305	Environmental Toxicology	3 credits
GEOG 2310	Climatology	3 credits
GEOG 2320	Geomorphology	3 credits
GEOG 2390	Geographic Information and Data Analysis	3 credits
GEOG 2400	Introduction to GIS	3 credits
PHYS 2010	Modern Physics	3 credits
PHYS 2030	Classical Mechanics	3 credits
PHYS 2040	Thermal Physics	3 credits
PHYS 2330	Intermediate Mechanics	3 credits
PHYS 2420	Intermediate Electricity and Magnetism	3 credits

Additional Course Requirements

Any two courses in Arts, not counting English, plus,
Any other two university-transferable courses

Notes:

* Students transferring to a BSc should confirm transferability.

† Students will receive credit for only one of MATH 1115, MATH 2335, MATH 2341 towards an Associate of Science in Mathematics.

CREDENTIAL AWARDED

Upon successful completion of this program, students are eligible to receive an **Associate of Science Degree in Mathematics**.