Mathematics: Associate of Science Degree

Faculty of Science and Horticulture	kpu.ca/science
Mathematics	kpu.ca/mathematics
Program Type	Undergraduate
Credential Granted	Associate Degree
Offered At	Richmond Surrey
Start Date(s)	September January May
Intake Type	Open intake
Format	Full-time Part-time
Instructional Cycle	Semester-based
Curriculum Effective Date	01-Sep-2016
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 2331	Introduction to Analysis	3 credits
MATH 2335†	Statistics for Life Sciences	3 credits

or MATH 2341†	Introduction to Statistics for Business	4 credits
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 CHEM 3310	Physical Chemistry	4 credits
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**.