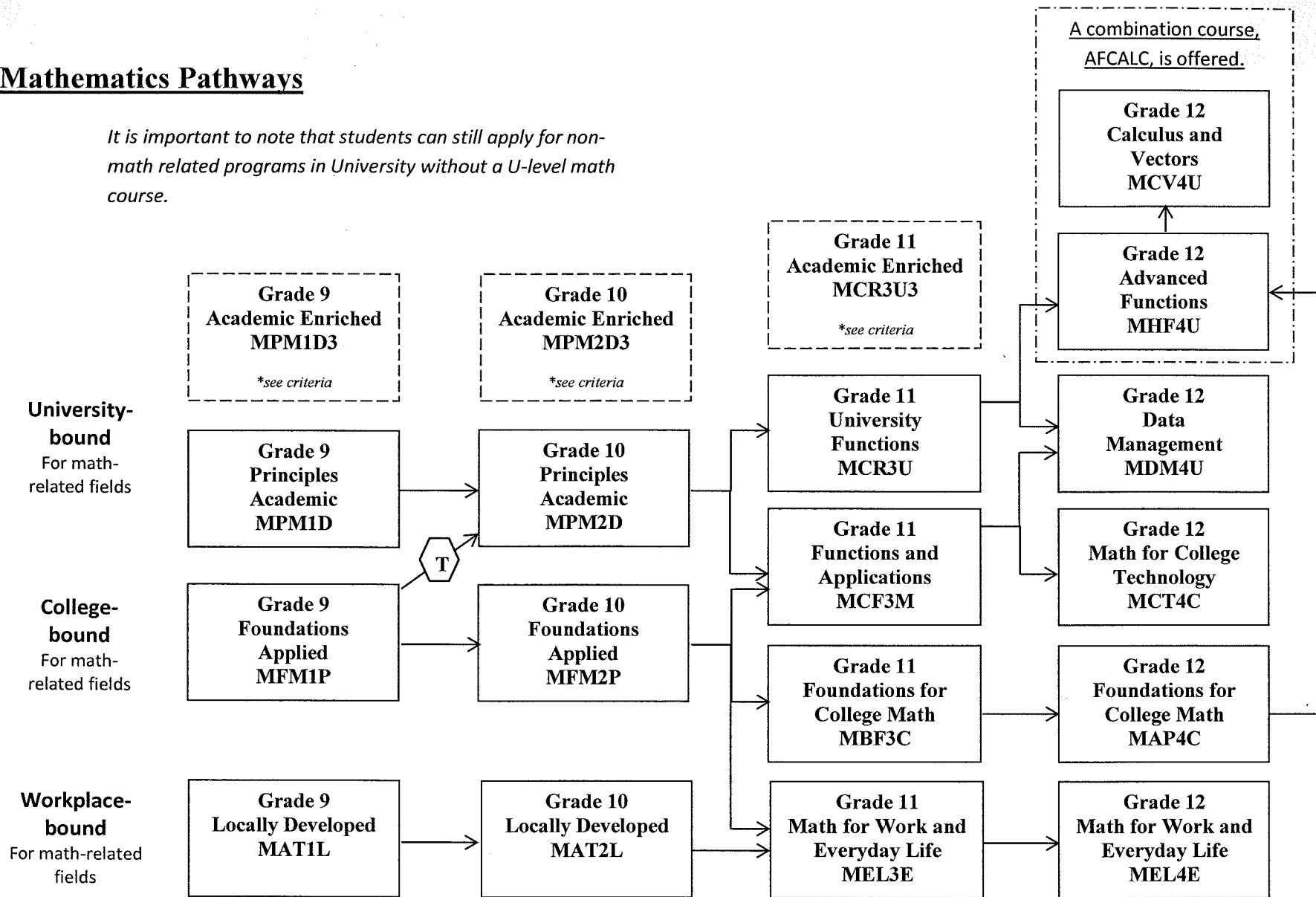


# Mathematics Pathways

It is important to note that students can still apply for non-math related programs in University without a U-level math course.



\*Enrolment in Enriched classes depends on recommendation by previous teacher, participation in math contests, excellent math marks and general attitude. This course is most suitable for students who show a genuine love for math and are willing to take the initiative to learn more.

**GRADE 12U MATH REQUIREMENTS FOR 2017 ONTARIO UNIVERSITY ADMISSIONS**

Primary requirements for 4-year degrees, with exceptions following								
UNIVERSITY	MATH	SCIENCE	ENGIN.	COMP SCI / IT	BUS./ COMM.	ARTS/ SOC. SCI.	ENV. STUD.	PHYS. ED./ KINES.
<b>ALGOMA</b>	NA - Fall 2017	BSc: MHF, MCV; BSc: Psych - 1 Math BA: Psych - none;	NA	B.CoSc: MHF + 1 Math; BSc: MHF	2 Math, MDM4U rec	None; Fin & Econ - 2 Math, (MDM rec); Econ - 2 Math	2017 - BSc: Env. Stud - 2 Math + 1 Sci or 2 Sci + 1 Math	NA
<b>BROCK</b>	MHF, MCV	3 from SBI4U, SC4U, SPH4U, MCV4U, MHF4U, SES4U, ICS4U; Bio, Chem, BioChem, Earth Sci, Phys - MHF or MCV; Nursing- 1 Math; Public Health - 11U rec	NA	MHF or MCV; Comp Sci & Math (Coop) - MHF, MCV; Comp & Bus - MHF + 1 Math	2 Math; Bus Econ - MHF or MCV	None; Econ - MHF or MCV; Child & Youth Studies, Psych - 1 Math (MDM*); Conc Ed: BA/BEEd - 1 Math (MDM*)	BA: Geog: - none; BSc: Geog: - MHF or MCV; Envir Geoscience - MHF or MCV	Phys Ed - 1 Math; Kines: BKin - 1 Math; Kines: BSc - MHF or MCV; Sport Mgt: BSM - 1 Math; Recr - None
<b>CARLETON</b>	MHF, MCV	BA: Bio - MHF, (MCV rec); BSc: Bio, Chem, Biochem, Psych - MHF, (MCV rec); Phys - MHF, MCV; Earth Sci, Phys Geog - MHF or MCV; Health - MHF, (MCV rec)	MHF + 1 of MCV, Bio, Earth&Sp, (MCV rec)	CS: MHF or MCV; BCS: Biomed Computing stream - MHF or MCV; IT - 1 Math	Comm, Intl Bus - MHF + 1 Math, (MCV rec); Indus Desig - MHF, (MCV rec)	None; Econ - MHF, (MCV rec); Int. Bus - MHF + 1 Math (MCV rec)	Earth, Env Sci - MHF or MCV; BAS, Archit: - MHF, (MCV rec); Indus Desig - MHF	NA
<b>GUELPH</b>	MHF, MCV	Bio Sci: Bio, Bio Med, Plant Sci, Neuro - MHF; Phys Sci: Bio & Pharm Chem, Chem, Phys, NanoSci - MCV; Agric - MHF; Child/Youth/Fam, Adult Devel, Nutr - 1 Math	MHF, MCV	Comp Sci - MCV; SoftwareEng - MCV	Acctng, Food&Agr, Mgmt - MHF + 1 Math; Hotel&Food, Pub Mgt, Tour Mgt - MHF	BA: Econ, Food Agr, Geog, Psych - none; BASC: Econ, Food Agr, Geog, Psych - MHF	Lndscp Arch - None; Envir Sci - MHF; EnvGeoSci - MCV;	Kines - 1 Math (Guelph- Humber)
<b>LAKEHEAD Thunder Bay</b>	MHF + 1 Math	Anthro, Bio, Phys - MHF + 2 of Bio, Chem, Phys, Earth&Space, MCV, or MDM; Chem - MHF, Chem + 1 of Math, Bio, Phys, MCV, or MDM; Earth Science, Natural Science - 2 Math or 2 Sci or 1 of each; Nurs - 1 Math	MHF	MHF + 1 of MCV, MDM, or ICS	1 Math	None; BSc, HBSc: Econ, Geol - 1 Math Psych - MHF + 2 of Sci, Math; Econ - 1 Math; Resour&Envir Econ - 2 Math	BA: Geog - none BSc: Geog - MHF; Env Mgt, Frstry, WaterRes Sci - 3 of Math, Sci, CS, Geog	Kines - 1 Math;
<b>LAURENTIAN</b>	MHF + 1 Math (MCV rec)	Bio, Chem, BioChem, Sci, Biomed Phys, Phys - MHF + 2 Sci, or 1 Sci + 1 Math (MCV rec); Forens Sci, Rad Thrpy - MHF, (MCV rec); Nurs - 1 Math; Midwifery - none	MHF + 1 of MCV, Bio, Earth&Sp, Economics	MHF + 2 Sci, or 1 Sci + 1 Math (MCV rec)	Commerce, Sports Admin - 2 Math	None; Psych - MHF + 2 Sci, or 1 Sci + 1 Math (MCV rec) Econ - none	EarthSci, EnvSci - MHF + 2 Sci, or 1 Sci + 1 Math (MCV rec); Anthro, Arch, Geog - none	Kines - MHF (MCV rec)
<b>MCMASTER</b>	MHF, MCV	Life Science 1 - MHF or MCV + 1 of MHF, MCV, Chem, Phys (MCV rec); Chem, Phys, Hon Integ Sci, Med Rad - MHF, MCV; Health Sci, Nurs - 1 Math; Midwifery - none	MCV	Comp Sci - MCV; Biotech- nology - MCV	Business 1 - 2 Math	None; Econ, Psych, Neuroscience & Behaviour - MHF or MCV rec	Environ & EarthSci - MHF or MCV + 1 of MHF, MCV, Sci (MCV rec)	Kines - MHF or MCV (MCV rec)
<b>NIPISSING</b>	BA: MCV + 1 Math; BSc: MHF, MCV	Bio - MHF or MCV; B.Sc. Psych - MCV; Liber Sci - MHF or MCV; Nurs- 1 Math rec	NA		BBA: - 1 Math rec	None; Econ - 1 Math; B.A. Psych - none	EnvBio&Tech - 1 of MCV, MHF or Phys; Geog - MCV + 1 Math	Phys Ed - 11M or 11U +1 Math rec
<b>OCAD</b>	NA	NA	NA	NA	NA	None	None	NA
<b>UNIVERSITY OF ONT INST OF TECH (UOIT)</b>	MHF + 2 of MCV, Bio, Chem, Phys (all 4 rec)	MHF + 2 of MCV, Bio, Chem, Phys (all 4 rec); Nurs, Health - 1 Math (MHF or MCV preferred); Med Lab Sci, Health Phys & Rad Sci - MHF or MCV	MHF, MCV	Comp Sci, Data Sci - MHF + 2 of MCV, Bio, Chem, Phys (all 4 rec); IT - 1 Math	1 Math; Game Devel & Entrepren - 1 Math	Forensic Psych - 1 Math rec; Forensic Sci - MHF + 2 of MCV, Bio, Chem, Phys	NA	Kines - 1 Math
<b>OTTAWA</b>	MHF, MCV	MHF, MCV; Health - 1 of MHF, MCV, Phys; Nurs - 11M or 11U or 12U; Psych (BA) - none; Psych (BSc) - MHF + 2 of MCV, Sci (MCV rec)	MHF, MCV	MHF, MCV	MHF, MCV	None; Econ - MHF + MCV rec; Math & Econ MHF, MCV;	None; EnvSci, Geology, -Geol/Phys - MHF, MCV	Human Kinetics: BHK - 1 Math; Human Kinetics: BSCHK - MHF, MCV
<b>QUEEN'S</b>	MHF, MCV	MHF, MCV; Concurrent Ed/Sci - MHF, MCV; BSc: Geog, Geol, BSch: Psych - MHF, MCV; Nurs - 1 Math	MCV + 1 of MHF, MDM, Bio, CS, Earth&Sp	MHF, MCV	MCV + 1 Math	None; Econ, Geog, Psych (BA) - none	Env Sci & Studies BAH - none, BSch - MHF, MCV	Kines - MHF + 2 of MCV, Chem, Phys; Phys Ed - program temp susp - 9/2017

**KEY TO SHORT FORMS:**

MHF = Advanced Functions; MCV = Calculus & Vectors; MDM = Mathematics of Data Management; \* = Preferred;  
None= No Math required; NA= Program not available; rec = Highly Recommended; 1 Math = 1 of MHF, MCV, MDM required;  
2 Math = 2 of MHF, MCV, MDM required; MHF + 1 Math = MHF + 1 of MCV or MDM required; (MHF, MCV rec)= MHF and MCV both  
recommended; 1 Math rec = 1 of MHF, MCV, MDM recommended; MHF (2 Math rec) = MHF required, MCV or MDM recommended;  
11M = MCF3M; 11U = MCR3U; 12U = 1 of MHF, MCV, MDM

**Primary requirements for 4-year degrees, with exceptions following**

UNIVERSITY	MATH	SCIENCE	ENGIN.	COMP. SCI.	BUS./ COMM.	ARTS/ SOC. SCI.	ENV. STUD.	PHYS. ED./ KINES.
<b>RMC</b>	MHF or MCV + 2 of MHF, MCV (not yet taken), Bio, Chem, Phys	MHF or MCV + 2 of MHF, MCV (not yet taken), Bio, Chem, Phys	MHF, MCV	MHF or MCV + 2 of MHF, MCV (not yet taken), Bio, Chem, Phys	11M, 11U or MHF + MCV rec	11M, 11U or MHF + MCV rec	NA	NA
<b>RYERSON</b>	MHF + MCV or MDM	MHF; Nurs - 11U or 11M or 12U*; Occ & Pub Health - Math and Phys rec; Nutr, Midwifery - None; BioMed Sci - MHF; Med Phys - MHF	MHF, MCV; Archit Sci - MHF or MCV	MHF + MCV* or MDM; Graphic Comm Mgt - 11U or 11M or 12U	Acct & Fin - MHF, MCV; Bus Mgt, Bus Tech, Hosp & Tour, Retail Mgmt - 1 Math (MCV*)	None; Int Dsgn, Fash Comm, Fash Dsgn - 11U or 11M or 12U; Early Child - 11U or 11M or 12U or Sci	Urb&Reg Plan - Can World Stud, Sci and/ or Math; Int Econ & Finance - 1 Math (MHF or MCV pref)	NA
<b>TORONTO Mississauga Campus</b>	MHF, MCV (MDM rec)	Chem-Phys Sci, Foren Sci - MHF (MCV rec); Life Sci (such as...Anthro, Bio) - MHF, (some MCV rec)	NA	MHF, MCV (MDM rec)	Comm - Acctng, Econ, Fin, Markng - MHF, MCV; Mgt - 1 Math	Psych (BSc) - MHF; Soc Sci - MHF required for several programs	Geocomp Sci, GeogInfSys, Geog, Geol - MHF, (MCV rec)	NA
<b>TORONTO St. George Campus</b>	MCV	BSc: Life Sci - Bio, Chem, Phys, Nanosci - MCV; Geology, Psych - MCV	MHF, MCV	MCV	MCV	None; Econ, Env Econ - MCV	Env Science - MCV	MHF or MCV
<b>TORONTO Scarborough Campus</b>	MHF, MCV	Bio, Phys, Chem - MHF, MCV; Biotech, Neuro - MHF, MCV; Paramed - MHF	NA	MHF, MCV	Acctng, Mgt (BBA), Mgt & Int Bus - MHF, MCV	None; Psych - none Intl Dev - MHF rec	EnvSci - MHF, MCV	NA
<b>TRENT</b>	MHF or MCV; Math Bus, Math Econ, Math Phys - MHF or MCV	Foren Sci, Phys, Biochem, ChemPhys Chem, - MHF or MCV; Bio, Foren & Sci, Geog, Psych (BSc), Water Sci - 1 Math rec Nurs - 1 Math	NA	Comp Syst + Phys - MHF or MCV; Comp, Inf Syst - 1 Math rec	BBA - MHF or MCV rec; Bus/Arts, Bus/Sci - MHF or MCV rec	BA: Geog&Bus - 1 Math rec BSc: - Anthro, Arch, Econ, Psych & Foren - 1 Math rec	Env Sci, Env Stud, Env & Res Sci, Sust Agri, Teacher Ed (Sci) - 1 Math rec	Kines - 1 Math
<b>WATERLOO</b>	MHF, MCV - Euclid rec	Hon Sci, Life Sci, Phys Sci, Sci & Bus - MHF, MCV + 2 of MDM, Bio, Chem, Earth&Sp, Phys; Health Stud - MHF rec; IntlDev - 1 Math or Sci or second language rec	MHF/MCV	MHF, MCV - Euclid rec, Can Comp Comp rec; Knw/Integr - 1 Math; Plan - 1 Math rec	Acct - MHF, MCV + MDM rec; Bus Adm - MHF, MCV Glob Bus & DigArts - MDM rec	Geog & Aviat, Geog & Env, Geoman 1+ Math rec; Soc, Psy - MDM rec; Eco - MDM, MCV rec	EnvirSci, Biotech - MHF, MCV + 2 of MDM, Sci; Envi/Res or Envi/Bus - 1 Math rec	Kines - MHF; Recr - None
<b>WESTERN</b>	MCV + 2 of Math, Sci, CS	MCV + 2 of Math, Sci, CS; Health Sci - 1 Math; Nurs - 11M or 1U or 12U; Foods & Nutri - 11M or 1U; Med Sci - MCV	MHF, MCV	MCV + 2 of MHF, Sci, CS; Music Adm - 1 Math	- 2 Math (MCV*); Mgt, Comm Aviat Mgt - 2 Math (MCV*)	None; Econ - MHF, MCV; Psych, Soc, Geog (at least 1 Math rec)	None: Env Sci - MCV + 2 of Math, Sci, CS	Kines: BA - 1 Math rec; BSc - 1 Math rec + (1 of Chem*, MCV, MFH, SPH, ICS rec)
<b>WILFRID LAURIER</b>	MHF, MCV	BSc: Bio, Chem, MHF; Phys - MHF + 2 of MCV, Chem, Phys; Biochem, Biotech - MHF; Bio & Math, Chem & Math - MHF, MCV; Health Sci - MHF Water Sci - MHF	NA	Comp Sci BA: MHF; BSc: MHF + 1 of MCV, Chem, Phys; Comp Sci & Math - MHF, MCV	BBA: MHF + 1 of MCV or MDM; Bus Adm & CS, Bus Adm & Math - MHF4U and MCV4U	None; BA: Psych - 1 of 3M, 3U or 4U; BSc: Psych - MHF; Comp Sci & Psych - MHF + 1 of MCV, Sci	Env Sci - MHF Geog, Geom - MHF Appl Econ - MHF; Econ - MHF + MCV or MDM	Kines: BKin - 11U or 11M or 12U
<b>WINDSOR</b>	MHF, MCV; Concurrent BMath/BEEd - MHF, MCV	Bio, Chem, Neurosci, Phys, Concurrent BSc/Bed, Foren - MHF + MCV rec*; Nurs - 1 Math	MHF + MCV rec*	MHF + MCV rec*	1 Math; Bus & Econ, Bus & Comp - 1 Math	None; Econ - MHF + (MCV, MDM rec); Interdis Arts & Sci - MHF + (MCV rec)	None; Vis Art & Built Env, EnvSci - MHF + MCV rec	Kines - None
<b>YORK</b>	BA, BSc - MHF + (MCV rec); Computational Math, Statistics - MHF + (MCV rec)	Bio, BioMed, BioTech, EnviroBio, Undec - MHF; Biochem, BioPhys, Chem, Earth & Atmos, Hon Integ Sci, Phys & Astron - MHF, MCV; Global Health - 1 Math; BSc: Undec - 1 Math (MHF rec); Health - 1 Math rec; BSc: Psych, Nurs - 1 Math	MHF, MCV; Digital Media - 1 Math	MHF + 1 Math (MCV*) Sci&Tech - 1 Math (MHF*); Info Tech: BA - 1 Math, BCom - MHF; Comp Secur - MHF + 1 Math (MCV rec)	Bus Adm, Int Bus Adm - MHF + (MCV* or MDM); Commerce - MHF; Dis & Emerg Mgt - MHF; Pub Admin, Hum Res Mgt - 1 Math	None; Econ, Financial & Bus Econ - MHF + MCV rec; BSc: Geog - 1 Math (MHF rec) Hum Res Mgmt - 1 Math	None; EnvSci - MHF, MCV; EnvStud - none; Geog - 1 Math (MHF*)	Kines: BA - 1 Math; Kines: BSc - 1 Math

**NOTES:** Students should check calendars for up-to-date requirements and Websites may provide updates. Info magazine may not have full details. MHF should be taken as a first math credit for most programs. MCV is required or recommended for most Math, Comp Sci, and Engineering programs. MDM is accepted in many programs, especially in Business and Social Sciences, but may fall outside the requirements in others, though still accepted as a credit. Most Math, Science and Computer Science programs listed are through the BMath, BSc or BCS (not BA) streams. Three-year degree programs may have fewer requirements.

**Special note regarding MCV 4U:** Many universities indicate MCV as an admission requirement without listing MHF as a requirement. They have indicated that MHF must be successfully completed, but does not need to be included in the "best 6" average, whereas marks from MCV will be included.

**SOURCES:**  
 University Websites  
<http://www.electronicinfo.ca/>  
<http://www.ontario.ca/education-and-training/ontario-universities>

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