McGill Joint Honours in Mathematics and Physics

Fall U1

MATH 248
Hon. Advanced Calculus
Prereq. MATH 133 and MATH 222

MATH 235
Algebra 1
Prereq. MATH 133

PHYS 260
Modern Physics and Relativity
Prereq. PHYS 142 and MATH 222

PHYS 251
Hon. Classical Mechanics 1
Prereq. PHYS 131 and MATH 222

PHYS 257
Experimental Methods 1
Coreq. PHYS 251

Winter U1

MATH 249
Hon. Complex Variables
Prereq. MATH 248

MATH 325
Hon. ODEs
Prereq. MATH 222

MATH 247
Hon. Applied Linear Algebra *or*
MATH 251
Hon. Algebra 2
Prereq. MATH 133

PHYS 241
Signal Processing
Prereq. PHYS 142

PHYS 258
Experimental Methods 2
Prereq. PHYS 257

Fall U2

MATH 242
Analysis 1 or
MATH 254
Hon. Analysis 1
Prereq. MATH 141

MATH 475
Hon. PDEs
Prereq. MATH 247 or MATH 251, MATH 248 and MATH 325

PHYS 253
Thermal Physics
Prereq. PHYS 131, MATH 222 and CHEM 120

PHYS 350
Hon. Electricity and Magnetism
Prereq. MATH 248 and MATH 325

PHYS 357
Hon. Quantum Physics 1
Prereq. MATH 247 or MATH 251, and PHYS 251

Winter U2

MATH 255
Hon. Analysis 2
Prereq. MATH 242

PHYS 362
Statistical Mechanics
Prereq. MATH 248 and PHYS 253

PHYS 351
Hon. Classical Mechanics 2
Prereq. PHYS 251

PHYS 457
Hon. Quantum Physics 2
Prereq. PHYS 357

Fall U3

MATH 454
Hon. Analysis 3
Prereq. MATH 255

MATH 456
Hon. Algebra 3
or other Hon. Math
Prereq. MATH 247 or MATH 251, and MATH 235

PHYS 352
Hon. Electromagnetic Waves
Prereq. PHYS 350

2 courses selected from:
PHYS 404 Climate Physics
PHYS 512 Computational Physics
PHYS 521 Astrophysics
PHYS 551 Quantum Theory
PHYS 557 Nuclear Physics
PHYS 558 Solid State
PHYS 559 Adv. Stat Mech

Winter U3

MATH 455
Hon. Analysis 4
or other Hon. Math if MATH 456 was taken
Prereq. MATH 454

MATH 458
Hon. Differential Geometry
Prereq. MATH 247 or MATH 251, and MATH 248

***PHYS 359**
Hon. Lab in Modern Physics
*** OR PHYS 469 (fall)**
Pre/Co-req. PHYS 457

PHYS 432 Fluids
PHYS 479 Hon. Research Project
PHYS 514 General Relativity
PHYS 519 Adv. Biophysics
PHYS 562 Electrodynamics
PHYS 567 Particle Physics