

## Nuclear Courses by University

### University Carleton

Course #	Description	Discipline	ID1
CHEM 4502	Radiochemistry	Civil	64
CHEM 5905	Radiochemistry	Chemistry	61
ENVE 5203	Hazardous & Radioactive Wastes	Waste	62
ISCI 2002	Human Impacts on the Environment	Environment	65
PHYS 4608	Nuclear Physics	Physics	66
PHYS 5208	Radiation Protection	Health Physics	63

### University Ecole Polytechnique

Course #	Description	Discipline	ID1
ELE6217	Systèmes à événements discrets	C&I	89
ENE6002	Thermohydraulique des systèmes diphasiques	Thermohydraulics	90
ENE6101	Physique statique des réacteurs	Physics	91
ENE6102	Cinétique des réacteurs nucléaires	Physics	92
ENE6103	Calcul neutronique des réacteurs	Physics	93
ENE6105	Effets des rayonnements et mat. nucléaires	Health Physics	94
ENE6107	Thermique des réacteurs nucléaires	Thermohydraulics	95
ENE6109	Gestion du combustible	Safety	96
ENE6110	Laboratoire de génie nucléaire	Safety	97
ENE6111	Analyse par activation et radio-isotopes	Health Physics	98

## Nuclear Courses by University

ENE6120	Simulat. et commande des réacteurs nucléaires	C&I	99
ENE6121	Sûreté des centrales nucléaires	Safety	100
ENE8203	Technologies nucléaires	Systems Engineering	101
ENE8210	Efficacité des sources d'énergie	Systems Engineering	88
<b>University</b>	McMaster		

<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
4D03/6D03	Nuclear Reactor Systems Analysis	Physics	1
4NE3	ADVANCED NUCLEAR ENGINEERING	Systems Engineering	10
4P03/6P03	Nuclear Power Plant Systems and Operation	Systems Engineering	2
4U04	Nuclear Laboratories	Physics	11
ENG PHY 3D03	PRINCIPLES OF NUCLEAR ENGINEERING	Systems Engineering	9
ENG PHY 710	Reactor Dynamics and Control	C&I	3
ENG PHY 713	Nuclear Safety Analysis and Reactor Accidents	Safety	4
ENG PHY 714	Nuclear Reactor Safety Design	Safety	5
ENG PHY 715	Selected Topics in Nuclear Thermalhydraulics	Thermohydraulics	6
ENG PHY 716	Reactor Heat Transport System Design	Thermohydraulics	7
ENG PHY 718	Reactor Heat Transport System Simulation/Analysis	Modelling	8
Med Phys 776	Principles of Radiation Protection	Health Physics	12
<b>University</b>	New Brunswick		

<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
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CHE 5313	Energy and the Environment	Environment	83
CHE 5804	Nuclear Chemical Processes	Chemistry	77
CHE 5824	Corrosion Processes	Chemistry	78
CHE 5834	Nuclear Engineering	Systems Engineering	79
CHE 5844	Nuclear Safety and Reliability	PSA	80
CHE 5854	Nuclear Heat Removal	Thermohydraulics	81
CHE 5877	Advanced Nuclear Systems	Systems Engineering	82
ME 5193	An Introduction to Flow-Induced Vibrations	Mechanical	84
ME 5373	Nuclear Reactor Engineering	Systems Engineering	85
ME 5744	Steam Supply Systems	Thermohydraulics	86
ME 6274	Mechanics of Nuclear Radiation	Physics	87
<b>University</b>	RMC		

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<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
CC501	Chemical And Nuclear Engineering Computations	Modelling	44
CC509	Nuclear Reactor Heat Transfer	Thermohydraulics	45
CC511	Health Physics and Radiation Protection	Health Physics	46
CC515	Nuclear Detection and Measurement	Physics	47
CC517	Shielding for Nuclear Activities	Physics	48
CC523	Nuclear Reactor Engineering	Systems Engineering	49
CC525	Nuclear Reactor Safety	Safety	50

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CC527	Nuclear Reactor Kinetics and Dynamics	Physics	51
CC533	Nuclear Fuels Engineering	Fuel	52
CC537	Site Remediation	Environment	53
CC543	Atmospheric Dispersion and Micrometeorology	Safety	54
CC565	Nuclear and Radiochemistry	Chemistry	55
CC567	Nuclear Fuel Management	Fuel	56
CC573	Nuclear Waste Management	Waste	57
CC593	Advanced Nuclear Reactor Physics	Physics	58
CC595	Nuclear Materials	Materials	59
CC597	Thermal Hydraulics and Two Phased Flow	Thermohydraulics	60
CCE351A	Nuclear Science	Physics	42
CCE362A	Environmental Sciences: Energy	Environment	43

**University** Saskatchewan

<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
PHYS 352.3-2(3L-1T)	Concepts of Radiation Physics	Health Physics	30
PHYS 857.3-1(4L-1S-	Radiological Physics	Health Physics	31

**University** Simon Fraser

<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
NUSC 341-3	Introduction to Radiochemistry	Chemistry	180
NUSC 342-3	Introduction to Nuclear Science	Physics	181

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NUSC 344-3	Nucleosynthesis and Distribution of the Elements	Physics	182
NUSC 346-2	Radiochemistry Laboratory	Chemistry	184
NUSC 444-3	Special Topics in Nuclear Science	Physics	185
NUSC 485-3	NUSC 485-3 Particle Physics	Physics	186
PHYS 385-3	PHYS 385-3	Physics	187

**University** Toronto

<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
CHE1149H	Electrolyte Thermodynamics	Chemistry	38
CHE1400H	Environmental Nuclear Science	Chemistry	39
CHE 1533H	Nuclear Chemical Engineering	Chemistry	40
CHE308H1 F	Chemical processes for energy generation & storage	Chemistry	34
CHE568H1	Nuclear engineering	Systems Engineering	35
CHL 5907H	Radiological Health	Health Physics	41
GLG103	Geology in Public Issues	Public Acceptance	32
MIE407H1 F	Nuclear engineering I: reactor physics, fuel cycle	Physics	36
MIE408H1 S	Nuclear engineering II: thermal and mechanical	Mechanical	37
PSY378H1	Engineering Psychology	Systems Engineering	33

**University** UNENE / McMaster

<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
UN0800	Industrial Research Project	Systems Engineering	20

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UN0801	Nuclear Power Plant Systems and Operation	Systems Engineering	21
UN0802	Nuclear Reactor Analysis	Physics	22
UN0803	Nuclear Reactor Safety Design	Safety	23
UN0804	Nuclear Reactor Heat Transport System Design	Thermohydraulics	24
UN0805	Introduction to Operational Health Physics	Health Physics	25

**University** UNENE / Queen's

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<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
UN0900	Industrial Research Project	Systems Engineering	26
UN0901	Nuclear Materials	Materials	27

**University** UNENE / Toronto

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<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
UN1000	Industrial Research Project	Systems Engineering	28
UN1001	Reactor Chemistry and Corrosion	Chemistry	29

**University** UNENE / Waterloo

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<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
UN0700	Industrial Research Project	Systems Engineering	17
UN0701	Engineering Risk and Reliability	PSA	18
UN0702	Power Plant Thermodynamics	Thermohydraulics	19

**University** UNENE / Western Ontario

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<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
UN0600	Industrial Research Project	Systems Engineering	13
UN0601	Control, Instrumentation & Electrical Systems NPPs	C&I	14
UN0602	Nuclear Fuel Waste Management	Waste	15
UN0603	Project Management for Nuclear Engineers	Systems Engineering	16

**University**    UOIT

<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
ENGR 2010U	Thermodynamic Cycles	Thermohydraulics	159
ENGR 2360U	Electric Power Systems	Electrical	146
ENGR 2500U	Introduction to Nuclear Physics	Physics	137
ENGR 2640U	Thermodynamics and Heat Transfer	Thermohydraulics	142
ENGR 2860U	Fluid Mechanics	Thermohydraulics	138
ENGR 2950U	Radiation Protection	Health Physics	160
ENGR 3260U	Intro to Energy Systems	Environment	170
ENGR 3530U	Safety and Quality Management	Safety	154
ENGR 3540U	Nuclear Steam Supply Systems	Systems Engineering	144
ENGR 3550U	Nuclear Plant Steam Utilization Systems	Thermohydraulics	149
ENGR 3560U	Radioactive Waste Management	Waste	147
ENGR 3570U	Environmental Effects of Radiation	Environment	163
ENGR 3820U	Nuclear Reactor Kinetics	Physics	140

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ENGR 3860U	Introduction to Nuclear Reactor Technology	Health Physics	179
ENGR 3930U	Heat Transfer	Thermohydraulics	162
ENGR 4110U	Power Systems	Systems Engineering	188
ENGR 4360U	Nuclear Plant Electric and Auxillary Systems	Electrical	152
ENGR 4370U	Nuclear Plant Safety	Safety	155
ENGR 4440U	Advanced Power Generation	Systems Engineering	189
ENGR 4460U	Nuclear Power Systems	Systems Engineering	178
ENGR 4480U	Emerging Energy Systems	Systems Engineering	177
ENGR 4510U	Nuclear Plant Chemistry	Chemistry	111
ENGR 4520U	Nuclear Plant Safety Design	Safety	116
ENGR 4610U	Corrosion for Engineers	Chemistry	117
ENGR 4620U	Radioactive Waste Management Design	Waste	105
ENGR 4640U	Nuclear Plant Operation	Systems Engineering	106
ENGR 4660U	Risk Analysis Methods	PSA	107
ENGR 4670U	Shielding Design	Physics	125
ENGR 4680U	Nuclear Materials	Fuel	118
ENGR 4700U	Nuclear Plant Design and Simulation	Systems Engineering	108
ENGR 4730U	Reactor Control	C&I	119
ENGR 4780U	Nuclear Reactor Design	Systems Engineering	120
ENGR 4810U	Nuclear Fuel Cycles	Fuel Cycle	126

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ENGR 4880U	Principles of Fusion Energy	Systems Engineering	127
ENGR 5100G	Advanced Energy Systems	Systems Engineering	102
ENGR 5180G	Advanced Nuclear Engineering	Physics	103
ENGR 5181G	Advanced Radiation Engineering	Physics	104
ENGR 5980G	Advances in Nuclear Power Plant Systems	Systems Engineering	194
ENGR 5985G	Advanced Power Plant Technologies	Systems Engineering	195
NUCL 5010G	Project Management for Nuclear Engineers	Systems Engineering	196
NUCL 5020G	Mathematical Methods in Nuclear Applications	Modelling	124
NUCL 5030G	Transport Theory	Modelling	197
NUCL 5040G	Monte Carlo Methods	Modelling	198
NUCL 5050G	Applied Risk Analysis	PSA	199
NUCL 5060G	Nuclear Concepts for Engineers & Scientists	Physics	112
NUCL 5065G	Thermohydraulic Concepts/Engineers & Scientists	Thermohydraulics	128
NUCL 5070G	Environmental Modelling	Environment	200
NUCL 5080G	Advanced .. Environmental Degradation of Materials	Materials	201
NUCL 5090G	Occupational Health and Safety.	Health Physics	202
NUCL 5100G	Nuclear Plant Operation	Systems Engineering	203
NUCL 5200G	Reactor Physics	Physics	204
NUCL 5210G	Advanced Reactor Physics	Physics	129
NUCL 5215G	Advanced Reactor Engineering	Physics	205

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NUCL 5220G	Fuel Management in Nuclear Reactors	Fuel	130
NUCL 5230G	Advanced Nuclear Thermalhydraulics	Thermohydraulics	206
NUCL 5240G	Heat Transfer in Nuclear Reactor Applications	Thermohydraulics	207
NUCL 5250G	Power Plant Thermodynamics	Thermohydraulics	131
NUCL 5260G	Reactor Containment Systems.	Safety	208
NUCL 5270G	C&I in CANDU	C&I	209
NUCL 5275G	Safety Instrumented Systems	Safety	210
NUCL 5280G	NUCL 5280G Advanced Reactor Control	C&I	211
NUCL 5285G	Advanced Process Control	C&I	132
NUCL 5290G	Advances in Nuclear Power Plant Systems	Systems Engineering	113
NUCL 5300G	Advanced Topics/Radioactive Waste Management	Waste	133
NUCL 5310G	Transmutation of Nuclear Waste	Waste	212
NUCL 5350G	Regulatory Affairs and Licensing Concepts	Safety	114
NUCL 5400G	Advanced Radiation Science	Physics	213
NUCL 5430G	Advanced Dosimetry	Health Physics	214
NUCL 5440G	Advanced Radiation Biophysics and Microdosimetry	Health Physics	134
NUCL 5460G	Industrial Radiography	Physics	115
RADI 2100U	Radiological and Health Physics	Health Physics	190
RADI 2110U	Health Physics Laboratory	Health Physics	191
RADI 3530U	Introduction to Radiological and Health	Health Physics	192

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RADI 3690U	Radiation Chemistry and Processing	Chemistry	193
RADI 4220U	Radiation Biophysics and Dosimetry	Health Physics	121
RADI 4430U	Industrial Applications of Radiation Techniques	Materials	109
RADI 4440U	Radioisotopes and Radiation Machines	Health Physics	123
RADI 4550U	Radiation Detection and Measurement	Health Physics	110

**University** Waterloo

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<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
CIVE 601	Engineering Risk and Reliability	PSA	71
CIVE 701	Topics in Mechanics	Mechanical	72
ME 459	Energy Conversion	Systems Engineering	73
ME 571	Air Pollution	Environment	76
SCI 270	Nuclear Science	Systems Engineering	74
SYDE 372	Introduction to Pattern Recognition	Modelling	75

**University** Western

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<b>Course #</b>	<b>Description</b>	<b>Discipline</b>	<b>ID1</b>
4429A/B	Nuclear Engineering	Systems Engineering	68
4439A/B	Conventional, Renewable and Nuclear Energy	Systems Engineering	67
CEE9619	Dynamics of Soils and Foundations	Civil	69
ECE 9505	Control, Instrumentation & Electrical Systems NPPs	C&I	70