

BEng (Hons) in Nuclear Engineering - 2019 Entry
(pre/co-req in brackets)

Year	Course	Course	Course	Course	Course	Course
1-1	COMM 1050 Technical Communications	ENGR 3200 Engineering Graphics and Design	MATH 1010 Calculus I	MATH 1850 Linear Algebra for Engineers (Coreq: MATH 1010)	PHY 1010 Physics I	Liberal Studies Elective
1-2	CHEM 1800 Chemistry for Engineers	ENGR 1200 Introduction to Programming	ENVS 1000 Environmental Science	MATH 1020 Calculus II (MATH 1010)	NUCL 1530 Radiation and Nuclear Technologies	PHY 1020 Physics II (PHY 1010)
2-1	ELEE 2790 Electric Circuits (MATH 1020, PHY 1020, MATH 1850)	ENGR 2140 Problem Solving, Modelling and Simulation (MATH 1020, PHY 1020, ENGR 1200) (Coreq: MATH 2860)	MANE 2220 Structure and Properties of Materials (CHEM 1800)	MATH 2860 Differential Equations for Engineers (MATH 1020, MATH 1850)	NUCL 2500 Introduction to Nuclear Physics (MATH 1020, PHY 1020)	NUCL 2860 Fluid Mechanics (MATH 1020, PHY 1010)
2-2	MATH 2810 Adv Engineering Mathematics (MATH 1020) OR MATH 2070 Numerical Methods (MATH 1020, MATH 1850)	NUCL/ENGR 2010 Thermodynamic Cycles (MATH 1020, PHY 1010)	NUCL 2950 Radiation Protection (NUCL 2500)	NUCL 3820 Nuclear Reactor Kinetics (NUCL 2500, MATH 2860)	SSCI 1470 Impact of Science and Technology on Society	STAT 2800 Statistics and Probability for Engineers (MATH 1020)
3-1	ENGR 3750 Integrated Engineering Laboratory (ENGR 2140, NUCL 2860, MANE 2220)	NUCL 3740 Scientific Instrumentation (ELEE 2790, STAT 2800)	NUCL 3930 Heat Transfer (ENGR/NUCL 2010)	NUCL 4640 Nuclear Plant Operation (PHY 1020)	RADI 3570 Environmental Effects of Radiation (NUCL 2950)	Complementary Studies Elective (BUSI or Liberal)
3-2	ENGR 3360 Engineering Economics	ENGR 3380 Strength of Materials (PHY 1010, MANE 2220)	ENGR 4730 Reactor Control (MATH 2860)	NUCL 4610 Corrosion for Engineers (CHEM 1800)	NUCL 4780 Nuclear Reactor Design (NUCL 2500, NUCL 2860, NUCL 3820, NUCL 3930, MATH 2070 or 2810)	Liberal Studies Elective
4-1	BUSI 3700 Strategic Management for Professionals	ENGR 4660 Risk Analysis Methods (STAT 2800)	NUCL 4625 Radioactive Waste Management Design (RADI 3570, NUCL 3930, NUCL 4610)	NUCL 4700 Nuclear Plant Design and Simulation (ENGR/NUCL 2010, NUCL 4640, NUCL 4780)	NUCL 4994 Capstone I (all courses from 1st-3rd year completed)	Engineering Science Elective
4-2	ENGR 4760 Ethics, Law and Professionalism for Engineers	NUCL 4460 Nuclear Power Systems (ENGR/NUCL 2010, NUCL 3930)	NUCL 4525 Nuclear Plant Safety Design (ENGR 4660, NUCL 4640, NUCL 4700)	NUCL 4810 Nuclear Fuel Cycles (NUCL 4610, NUCL 4780)	NUCL 4998 Capstone II (NUCL 4994)	Engineering Design Elective