

School of Science, Engineering and IT Semester 1, 2019 Course Listing – Engineering

Course Code	Course Name	PR - Pre-Requisite EX – Exclusion	MTH	CHLL	BWK	ODL	NTC
ITECH1001	Communications in Technology	PR: Basic computing skills EX: ITECH5001	Y	Y	Y	Y	
ITECH1100	Understanding the Digital Revolution	PR: Nil EX: Nil	Y	Y	Y	Y	
ITECH1101	IT Problem Solving	PR: Nil EX: Nil	Y	Y	Y	Y	
ITECH1102	Networking and Security	PR: Nil PR: Nil	Y	Y	Y	Y	
ITECH1103	Big Data and Analytics	PR: Nil EX: Nil	Y			Y	
ITECH1400	Foundations of Programming	PR: Nil EX: ITECH1000 and ITECH5000	Y			Y	
ITECH2002	Systems Modelling	PR: ITECH1100 EX: ITECH2101	Y	Y	Y	Y	
ITECH2003	Web Design	PR: ITECH1100 EX: ITECH2106	Y	Y	Y	Y	
ITECH2301	Network Architecture and Design	PR: ITECH1102 EX: Nil	Y	Y		Y	
ITECH2304	Emerging Information Systems	PR: ITECH1100 EX: Nil	Y		Y	Y	
ITECH2306	Agile Coding	PR: ITECH2000 and ITECH2001 OR ITECH1000 or ITECH1400 EX: ITECH2100	Y	Y	Y	Y	
ITECH2308	Contemporary Mainframes	PR: ITECH1104 EX: Nil	Y			Y	
ITECH2311	Industry Experience 1	PR: At least 8 computing courses EX: Nil	Y			Y	
ITECH3000	IT Professional Engagement	PR: Nil EX: Nil	Y	Y	Y	Y	Y
ITECH3001	User Experience	PR: ITECH1103 and ITECH2003 EX: Nil	Y	Y	Y	Y	
ITECH3101	Business Analytics and Decision Support	PR: ITECH1103 EX: Nil	Y		Y	Y	
ITECH3104	Game Programming	PR: ITECH2100 or ITECH2306 EX: ITECH3205 and ITECH3206	Y			Y	
ITECH3105	Mainframe Systems and Services	PR: ITECH2308 EX: Nil	Y			Y	
ITECH3107	Mobile Device Programming	PR: ITECH2306 EX: ITECH3250	Y	Y	Y	Y	
ITECH3108	Dynamic Web Development	PR: ITECH2003 EX: ITECH3224	Y			Y	
ITECH3203	Professional Development	PR: 7 computer courses and ITECH1001 EX: ITECH7203				Y	
ITECH3208	Project 1	PR: ITECH2002 or ITECH2101 or ITECH3201 & ITECH2250 or ITECH3213 EX: Nil	Y	Y	Y	Y	
ITECH3209	Project 2	PR: ITECH3208 EX: Nil	Y			Y	

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ITECH3218	C Programming, Data Structures and Algorithms	PR: ITECH2110	Y			Y	
ITECH3215	Information Security	PR: ITECH1002 or ITECH1102 EX: Nil	Y	Y		Y	
ITECH3220	Systems Programming	PR: ITECH3218	Y			Y	
ITECH5402	Enterprise Systems	PR: Nil EX: Nil	Y			Y	
ITECH5500	Professional Research & Communication	PR: ITECH1100 EX: ITECH5401	Y				
ITECH7000	IT Professional Engagement	PR: Nil EX: Nil	Y			Y	Y
ITECH7400	IT Service Management and Professional Culture	PR: ITECH1100 and 4 ITECH courses EX: ITECH7402	Y			Y	
ITECH7401	IT Project Management Leadership	PR: ITECH1100 EX: Nil	Y			Y	
ITECH7407	Real Time Analytics	PR: ITECH1006 or ITECH1103 EX: Nil	Y			Y	
ITECH7409	Software Testing	PR: ITECH1000 or ITECH1400 EX: Nil	Y			Y	
ITECH7410	Software Engineering Methodologies	PR: ITECH1400 or ITECH1000 EX: Nil	Y			Y	
ITECH7413	Supply Chain Operations & Management	PR: ITECH1006 or ITECH1103 EX: Nil	Y			Y	
ITECH7415	Masters Project	PR: ITECH5500 and ITECH7401 EX: ITECH7403 and ITECH7404 and ITECH7405 and ITECH7602	Y			Y	

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ENGIN1001	Professional Engineering	PR: Nil EX: ENCOR1005	Y	Y		Y	
ENGIN1002	Engineering Physics	PR: Nil EX: ENCOR1021 and ENCOR2100	Y	Y		Y	
ENGIN1003	Materials in Engineering	PR: Nil EX: ENCOR1110	Y	Y		Y	
ENGIN2001	Professional Practice	PR: ENCOR1005 or ENGIN1001 EX: ENCOR3035	Y	Y			Y
ENGIN2201	Hydraulics and Hydrology	PR: ENCOR1021 or ENCOR2100 or ENGIN1002 EX: ENCIV2320	Y	Y			
ENGIN2202	Concrete Technology & Civil Construction	PR: ENCOR1110 or ENGIN1003 EX: ENCIV2020	Y	Y			
ENGIN2301	Mechanics of Solids	PR: ENCOR1000 or ENCOR1021 or ENGIN1005 EX: ENCOR2030	Y	Y			
ENGIN2302	Engineering Dynamics	PR: ENGIN1005 EX: ENMEC2001	Y				
ENGIN2401	Analog and Digital Electronics	PR: ENCOR1000 or ENCOR1021 or ENGIN1002 EX: ENMTX2010		Y		Y	
ENGIN2402	Measurement and Computer Instrumentation	PR: ENCOR1000 or ENCOR1021 or ENGIN1002 EX: ENMTX2020 and ETMEC3260	Y	Y		Y	
ENGIN2403	Fluid and Pneumatic Control	PR: ENCOR1000 or ENCOR1021 or ENGIN1002 and ENGIN1006 EX ENMTX2030		Y		Y	
ENGIN2501	Mine Power and Services Technology	PR: Nil EX: ENMIN5100 and ETMIN2260	Y			Y	
ENGIN2502	Rock Fragmentation	PR: Nil EX: ENMIN2040	Y				
ENGIN3001	Engineering Research Methodology and Management	PR: ENCOR1005 and ENGIN1001 EX: ENCOR4010 and ENMTX4060	Y				
ENGIN3201	Structural Design	PR: ENCIV2310 or ENGIN2203 EX: ENCIV3310	Y				
ENGIN3202 (Winter)	Geotechnical Engineering	PR: ENCIV2330 or ENGIN2204 EX: ENCIV3330	Y	Y		Y	
ENGIN3203	Traffic and Transport	PR: Nil EX: ENCIV3340	Y	Y			
ENGIN3204	Engineering Surveying	PR: Nil EX: ENCIV2010	Y	Y		Y	
ENGIN3301	Fluid Dynamics	PR: ENCOR2100 or ENGIN2304 EX: ENMEC3051	Y				
ENGIN3302	Introduction to Vibration Analysis	PR: ENGIN2302 or ENMEC2001 EX: ENMEC3120	Y				
ENGIN3303	Robotics	PR: ENGIN2302 or ENMEC2001 EX: ENMEC4160	Y				
ENGIN3401	Engineering Computer Applications and Interactive Modelling	PR: ENCOR1021 or ENGIN1006 EX: ENMTX3010 and ITECH1000		Y			

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ENGIN3402	Mechatronics Components Design	PR: ENCOR1010 or ENGIN1004 and ENGIN2303 or ENMEC2111 EX: ENMTX3020		Y		Y	
ENGIN3404	Systems Dynamics and Control	PR: MATHS3001 or MATHS3040 EX: ENMEC3500 and ENMTX3040	Y	Y		Y	
ENGIN3501	Underground Production Systems	PR: ENGIN2502 or ENMIN2040 EX: ENMIN3020	Y			Y	
ENGIN3502	Subsurface Environmental Engineering	PR: ENCOR2100 or ENGIN2304 EX: ENMIN3050 and ENMIN5023	Y			Y	
ENGIN4001	Engineering Project 1	PR: ENGIN3001 EX: ENCOR4100	Y	Y		Y	
ENGIN4002	Engineering Project 2	PR: ENCOR4100 or ENGIN4001 EX: ENCOR4200	Y	Y		Y	
ENGIN4301	Machine Dynamics and Vibration	PR: ENGIN3303 or ENMEC4160 EX: ENMEC4060	Y				
ENGIN4401	Industrial Robotic Systems	PR: ENGIN3406 or ENMTX4010 EX: ENMTX3070		Y			
ENGIN5002	Advanced Engineering Project 1	PR: ENGIN3001 or ENGIN5001 EX: ENCOR7020	Y				Y
ENGIN5003	Advanced Engineering Project 2	PR: ENGIN5002 EX: ENCOR7030	Y				
ENGIN5201	Surface Water Hydrology	PR: ENGIN2201 EX: Nil				Y	
ENGIN5202	Advanced Structural Analysis 1	PR: ENGIN3201 EX: Nil	Y				
ENGIN5301	Machine System Design	PR: ENCOR2030 or ENGIN2301 and ENGIN3002 or ENMEC2120 EX: ENMEC3250 and ENMEC7030	Y				
ENGIN5302	Modelling and Simulation	PR: MATHS3001 or MATHS3040 and ENGIN2301 EX: ENCOR4050	Y				
ENGIN5501	Mine Safety and Environmental Engineering	PR: Nil EX: ENMIN5020				Y	Y
ENGIN5502	Advanced Rock Breakage	PR: Nil EX: ENMIN7040	Y			Y	
ENGIN5504	Mine Environmental Engineering	PR: Nil EX: ENMIN7050	Y			Y	
ENGIN5505	Mine Planning and Scheduling	PR: Nil EX: ENMIN4090 and ENMIN7010	Y			Y	
ENGIN5511 (Winter)	Mine Surveying	PR: Nil EX: ENMIN5021	Y			Y	
ENGIN5512	Underground Production Systems	PR: Nil EX: ENMIN5130	Y			Y	
ENGIN5514 (Winter)	Production Drilling and Blasting	PR: Nil EX: ENMIN5110				Y	

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MGGGC7105	Slope Stability	PR: Nil EX: Nil				Y	
MGGGC7106	Groundwater Assessment	PR: MGGGC6204 EX: Nil				Y	
MREGC5001	Terotechnology & Life Cycle Costs	PR: Nil EX: ENMTX4050				Y	
MREGC5002	Maintenance Management	PR: Nil EX: Nil				Y	
MREGC5005	Quantitative Techniques for Asset Management	PR: Nil EX: MREGC5101				Y	
MREGC5008	Maintenance & Reliability Engineering Project	PR: At least 45 credit points from program GEM4 or GMR9 EX: Nil				Y	
MREGC5101	Basic Quantitative Skills for Reliability Engineering	PR: Nil EX: MREGC5005				Y	
MREGC5102	Understanding Reliability	PR: Nil EX: Nil				Y	

School of Science, Engineering and IT Semester 1, 2019 Course Listing – Science & Maths

Course Code	Course Name	PR -Pre-Requisite EX – Exclusion	MTH	CHLL	BWK	ODL	NTC
MATHS1000	Upon the Shoulders of Giants	PR: VCE Mathematics or equivalent EX: ENCOR1015 and MATHS2000 and SCCOR1300	Y			Y	
MATHS1001	Modelling and Change (Intro Level)	PR: Nil EX: Nil	Y	Y		Y	
MATHS2003	Profit Loss and Gambling	PR: At least one introductory level maths course or equivalent EX: MATHS1003	Y	Y		Y	
MATHS2016	Modelling Continuous Change	PR: MATHS1001 PR: Nil	Y	Y		Y	
MATHS3002	Analytics Project 1	PR: MATHS2001 or STATS2101 EX: Nil	Y			Y	Y
MATHS3004	Modelling the environment	PR: MATHS2001 EX: Nil				Y	Y
MATHS3007	Puzzles Patterns and Proofs	PR: At least one intermediate level mathematics course EX: MATHS2005	Y			Y	
SCGEO1105	Earth's Living History	PR: Nil EX: Nil	Y				
SCGEO2106	Hydrology	PR: ENCOR1015 or SCCOR1300 or MATHS1000 EX: Nil	Y			Y	
SCGEO2111	Landscape Evolution	PR: SCGEO1102 or SCGEO1106 EX: Nil	Y			Y	
SCGEO2112	Sedimentology and Stratigraphy	PR: SCGEO1102 EX: SCGEO2104 and SCGEO3101 and SCGEO3105	Y				
SCGEO3103	Applied Geochemistry	PR: SCGEO1102 EX: Nil	Y			Y	
SCGEO3104	Fieldwork	PR: SCGEO2103 and SCGEO2107 and SCGEO2102 EX: SCGEO3102	Y				Y
SCGEO3112	Soils and Weathering: Regolith Science	PR: SCENV1502 EX: SCGEO2101	Y				
SCMET3100	Mineral Processing 1	PR: SCCHM1003 or SCMET1002 EX: Nil	Y			Y	
STATS1000	Statistical Methods	PR: Nil EX: SCIGC1020	Y	Y	Y		
STATS2101	Statistics for Prediction	PR: STATS1000 EX: Nil	Y			Y	