

# Bachelor of Engineering (Materials Engineering)

## Year 2 Poly Direct Entry Admission (AY2018-19)

### ACADEMIC UNIT (AU) REQUIRED FOR GRADUATION

<i>Bachelor of Engineering (Materials Engineering)</i>	Year of Study	Core	Core Electives	GER			Unrestricted Electives	Total AU	
				Core	Electives				
					BM	LA			STS
<b>Year 2 Poly Direct Entry Admission</b>	2	32	-	5	6		-	43	
	3	26	-	4	-		-	30	
	4	17	12	3	-	-	-	6	38
	All Years							111	

Description of Abbreviation

BM – Business & Management

LA – Liberal Arts

STS – Science, Technology & Society

**YEAR 2 - Poly Direct Entry Admission (AY2018-19)**

<b>Course Code and Title</b>	<b>Type</b>	<b>AU</b>
<b>YEAR 2 SEMESTER 1</b>		
GC0001 Introduction to Sustainability: Multidisciplinary Approaches and Solutions	GER Core	1
MH1810 Mathematics I*	Core	3
MS1015 Materials Science	Core	3
MS1016 Thermodynamics of Materials	Core	3
MS2012 Introduction to Manufacturing Processes	Core	3
MS2013 Polymers and Composites	Core	3
MS2015 Mechanical Behaviour of Materials	Core	3
MS2081 Laboratory IIA	Core	1
MS8001 Management with Humour	GER Elective (BM)	3
<b>TOTAL</b>		<b>23</b>

\* Students who have obtained **Grade 'B+' or above** for all Engineering Mathematics diploma modules are eligible for exemption.

<b>YEAR 2 SEMESTER 2</b>		
HW0188 Engineering Communication I	GER Core	2
HY0001 Ethics and Moral Reasoning	GER Core	1
ML0001 Absolute Basics for Career Course	GER Core	1
MH2811 Mathematics II	Core	3
MS2014 Materials Structure and Defects	Core	3
MS2016 Phase Transformation and Kinetics	Core	3
MS2018 Electronic & Magnetic Properties of Materials	Core	3
MS2082 Laboratory IIB	Core	1
GER-PE (ANY)	GER Elective	3
<b>TOTAL</b>		<b>20</b>

**YEAR 3 – Poly Direct Entry Admission (AY2018-19)**

<b>Course Code and Title</b>	<b>Type</b>	<b>AU</b>
<b>YEAR 3 SEMESTER 1</b>		
ET0001 Enterprise and Innovation	GER Core	1
ML0002 Career Power Up!	GER Core	1
HW0288 Engineering Communication II	GER Core	2
MS3011 Metallic & Ceramic Materials	Core	3
MS3012 Micro/Nanoelectronic Materials Processing	Core	3
MS3013 Environmental Effects on Materials	Core	3
MS3014 Analysis of Materials	Core	3
MS3015 Materials Aspects in Design	Core	3
MS3081 Laboratory III	Core	1
<b>TOTAL</b>		<b>20</b>

<b>YEAR 3 SEMESTER 2</b>		
MS3099 Professional Internship	Core	10
<b>TOTAL</b>		<b>10</b>

**YEAR 4 – Poly Direct Entry Admission (AY2018-19)**

<b>Course Code and Title</b>	<b>Type</b>	<b>AU</b>
<b>YEAR 4 SEMESTER 1</b>		
MS4013 Biomaterials	Core	3
EG0001 Engineers & Society	GER Core	3
MS4089 Final Year Project	Core	4
Major Prescribed Elective 1	Core Elective	3
Major Prescribed Elective 2	Core Elective	3
UE 1	Unrestricted Elective	3
<b>TOTAL</b>		<b>19</b>

<b>YEAR 4 SEMESTER 2</b>		
MS4012 Quality Control	Core	3
MS4014 Nanomaterials: fundamentals and applications	Core	3
MS4089 Final Year Project	Core	4
Major Prescribed Elective 3	Core Elective	3
Major Prescribed Elective 4	Core Elective	3
UE 2	Unrestricted Elective	3
<b>TOTAL</b>		<b>19</b>