

**Bachelor of Engineering (Materials Engineering)  
Second Major in Business - ITP (AY2021-22)**

Updated: 1-Sep-21

**Academic Unit (AU) Required for graduation**

Year of Study	Core	MPE	CC	FC	BDE	Total AU
1	25 / 26 <sup>+</sup>	-	9	-	6	40 / 41 <sup>+</sup>
2	16	-	8	3	11	38
3	22	-	-	7	10	39
4	12	9	-	-	9	30
	75 / 76 <sup>+</sup>	9	17	10	36	147 / 148 <sup>+</sup>

<sup>+</sup>Students without H2 Level Physics will take PH1012 (4 AU)

**Year 1 - Semester 1**

Course Code and Title	Course Type	AU	Pre-Req	Co-Req
CC0003 Ethics & Civics in a Multi-Cultural World	CC	2		
CC0005 Healthy Living & Wellbeing	CC	3		
PH1011 Physics <sup>*/**</sup>	Core	3		
MH1810 Mathematics I <sup>+</sup>	Core	3		
MS1013 Materials Chemistry I <sup>+</sup>	Core	2		
MS1008 Introduction to Computational Thinking	Core	3		
MS1017 Introduction to Materials Science	Core	2		
AB1201 Financial Management	BDE	3		
<b>Total</b>		<b>21</b>		

*\* Students who obtained at least 3 'A's in H2 level subjects and at least grade 'E' or 'C6' in General Paper (GP) or Knowledge Inquiry (KI) will be eligible for exemption if a grade 'A' is obtained in the corresponding subject at H2 level.*

*\*\* Students without H2 Level Physics will take PH1012 Physics A (4 AU)*

**Year 1 - Semester 2**

Course Code and Title	Course Type	AU	Pre-Req	Co-Req
CC0001 Inquiry and Communication in the Interdisciplinary World	CC	2		
CC0002 Navigating the Digital World	CC	2		
EG1001 Engineer & Society	Core	2		
MS1014 Materials Chemistry II	Core	2		
MS1018 Properties of Materials	Core	2		
MS1016 Thermodynamics of Materials	Core	3		MS1017
MS2013 Introduction to Polymer Science	Core	3		MS1014/MS1016
AB1501 Marketing	BDE	3		
<b>Total</b>		<b>19</b>		

**Year 2 - Semester 1**

Course Code and Title	Course Type	AU	Pre-Req	Co-Req
CC0007 Science & Technology for Humanity	CC	3		
MH2811 Mathematics II	Core	3		MH1810
MS2014 Materials Structure and Defects	Core	3	MS1017	MS1018
MS2016 Phase Transformation and Kinetics	Core	3		MS1016
MS2083 Polymer Lab	Core	1	MS2013	
AD1102 Financing Account	BDE	3		
BF2218 Commodities Markets	BDE	4		

<b>Total</b>	<b>20</b>
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Year 2 - Semester 2		
Course Code and Title	Course Type	AU
ML0004 Career and Entrepreneurial Development for the Future World	CC	2
CC0006 Sustainability: Society, Economy & Environment	CC	3
MS0003 Introduction to Data Science and Artificial Intelligence	FC	3
MS2012 Introduction to Manufacturing Processes	Core	3
MS2015 Mechanical Behaviour of Materials	Core	3
BF3214 Commodities Trading	BDE	2
BDE1	BDE	2
<b>Total</b>		<b>18</b>

Pre-Req  
MS1008  
Co-Req

Year 3 - Semester 1		
Course Code and Title	Course Type	AU
MS2018 Electronic & Magnetic Properties of Materials	Core	3
MS3011 Metallic & Ceramic Materials	Core	3
MS3012 Micro/Nanoelectronic Materials Processing	Core	3
MS3013 Corrosion of Materials	Core	3
MS3082 Design Lab	Core	1
AD2102 Management Accounting	BDE	3
<b>Total</b>		<b>16</b>

Pre-Req  
MS2016  
MS2013/MS3011  
Co-Req

Year 3 - Semester 2		
Course Code and Title	Course Type	AU
HW0288 Effective Communication 2	FC	2
MS3014 Analysis of Materials	Core	3
MS3015 Materials Aspects in Design	Core	3
MS4012 Quality Control	Core	3
BF2216 Trade Incoterms & Ship Chartering	BDE	4
BDE2	BDE	3
<b>Total</b>		<b>18</b>

Pre-Req  
MS3082  
MS2013/MS3011  
Co-Req

Year 3 - Special Term		
Course Code and Title	Course Type	AU
MS3096 Professional Attachment	FC	5
<b>Total</b>		<b>5</b>

Pre-Req  
Co-Req

Year 4 - Semester 1		
Course Code and Title	Course Type	AU
MS4089 Final Year Project	Core	4
MS4013 Biomaterials	Core	2
MPE1	MPE	3
BE1402 Business Operations and Process	BDE	3
BF2302 International Tax and Trading Law	BDE	2
<b>Total</b>		<b>14</b>

Pre-Req  
Year 4 Standing  
MS2013  
MS3011  
Co-Req

Year 4 - Semester 2		
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Course Code and Title	Course Type	AU
MS4089 Final Year Project	Core	4
MS4014 Nanomaterials: Fundamentals And Applications	Core	2
BF3213 Enterprise Risk Management	BDE	2
BF3212 Trade, Structured & Supply Chain Finance	BDE	2
MPE2	MPE	3
MPE3	MPE	3
<b>Total</b>		<b>16</b>

Pre-Req  
Year 4 Standing  
MS2018/MS3012/MS3013

Co-Req