

AU Requirement for Double Degree Programme (DDP)

Bachelor of Engineering (Mechanical Engineering) and Bachelor of Social Science (Economics)

Students admitted from AY2020/2021 **Mainstream**

Year of Study	Number of Academic Units (AUs)										
	ME CORE (C)	ECONS CORE (EC)	ME MAJOR PE (PE)	ECONS ELECTIVE (EPE)	General Education Requirement (GER)					Total	
					Core (GC)	Prescribed Electives					UE
						LA	STS	BM	ANY		
1	25	12	-	-	8	-	-	-	-	-	45
2	27	9	-	-	4	-	-	-	-	-	40
3	26	-	-	3	-	-	-	-	-	-	29
4	4	4	6	18	2	-	-	-	-	-	34
5	8	-	6	18	-	-	-	-	-	-	32
<u>Total</u>	90	25	12	39	14	0				0	180

Course Code and Title	Type	AU	Pre-requisite/ Remarks
YEAR 1 SEMESTER 1			
MH1810 Mathematics I	C	3	
PH1011 Physics OR PH1012 Physics A	C	3 4	PH1011: 'A' level Physics
FE1073 Introduction to Engineering & Practices	C	1	
MA2003 Introduction to Thermo-fluids	C	3	
HE1001 Microeconomics Principles	EC	3	
HE1002 Macroeconomics Principles	EC	3	
HW0188 Effective Communication	GC	2	HW0001 (co-requisite)
GC0001 Sustainability: Seeing Through The Haze	GC	1	
ET0001 Enterprise & Innovation	GC	1	
HY0001 Ethics and Moral Reasoning	GC	1	
Total		21	
YEAR 1 SEMESTER 2			
MH1811 Mathematics II	C	3	
MA1001 Dynamics	C	3	Having read PH1011/PH1012/CY1305 and MH1810/MH2812/ CY1201
MA1008 Introduction to Computational Thinking	C	3	
MA2001 Mechanics of Materials	C	3	
Engineering Fundamentals 2	C	3	
EG0001 Engineers and Society	GC	3	
HE1005 Introduction to Probability and Statistical Inference	EC	3	
HE2002 Intermediate Macroeconomics	EC	3	HE1002/AB9091/HE9091
Total		24	
YEAR 2 SEMESTER 1			
MA2002 Theory of Mechanism	C	3	MA1001
MA2004 Manufacturing Processes	C	3	
MA2006 Engineering Mathematics	C	3	(MH1810 & MH1811)/ MH2812/CY1203
MA2007 Thermodynamics	C	3	MA2003
MA2009 Introduction to Electrical Circuits & Electronic Devices	C	3	
MA2071 Laboratory Experiments (ME)	C	1	
HE2005 Principles of Econometrics	EC	3	HE1005
ML0003 Kickstart Your Career Success	GC	1	
Total		20	
YEAR 2 SEMESTER 2			
MA2005 Engineering Graphics	C	3	
MA2079 Engineering Innovation and Design	C	2	Semester 2 with 1 week in Special Term
MA3001 Machine Element Design	C	3	Having read MA2001 and MA2002
MA3006 Fluid Mechanics	C	3	MA2003
HE2001 Intermediate Microeconomics	EC	3	
HE3021 Intermediate Econometrics	EC	3	HE2005
MA0218 Introduction to Data Science and Artificial Intelligence	GC	3	
Total		20	

YEAR 3 SEMESTER 1			
MA3002 Solid Mechanics and Vibration	C	3	MA2001
MA3003 Heat Transfer	C	3	MA2007
MA3004 Mathematical Methods in Engineering	C	3	(MH1810 & MH1811)/ MH2812/CY1203
MA3005 Control Theory	C	3	Having read MA2006
MA3071 Engineering Experiments (ME)	C	1	
MA4002 Fluid Dynamics	C	3	MA3006
Economics Elective 1	EPE	3	
Total		19	
YEAR 3 SEMESTER 2			
MA3080 Professional Internship	C	10	Students may do MA3075 Professional Attachment in Year 2 Special Semester (5 AU) and UE courses in any semester (5 AU) instead of MA3080.
Total		10	
YEAR 4 SEMESTER 1			
MA4001 Engineering Design	C	4	Having read MA3001
MA48XX Major-PE 1	PE	3	
HE4010 Singapore Economy in a Globalized World	EC	4	HE2001 & HE2002
Economics Elective 2	EPE	3	
Economics Elective 3	EPE	3	
Total		17	
YEAR 4 SEMESTER 2			
MA48XX Major-PE 2	PE	3	
Economics Elective 4	EPE	3	
Economics Elective 5	EPE	3	
Economics Elective 6	EPE	3	
Economics Elective 7	EPE	3	
HW0288 Engineering Communication	GC	2	HW0188
Total		17	
YEAR 5 SEMESTER 1			
MA4079 Final Year Project	C	4	Year 4 standing, 2 semesters
MA48XX Major-PE 3	PE	3	
Economics Elective 8	EPE	3	
Economics Elective 9	EPE	4	
Economics Elective 10	EPE	4	
Total		18	
YEAR 5 SEMESTER 2			
MA4079 Final Year Project	C	4	Year 4 standing, 2 semesters
MA48XX Major-PE 4	PE	3	
Economics Elective 11	EPE	4	
Economics Elective 12	EPE	3	
Total		14	
GRAND TOTAL (Year 1 to 5)		180	

AU Requirement for Double Degree Programme (DDP)

Bachelor of Engineering (Mechanical Engineering) and Bachelor of Social Science (Economics)

Students admitted from AY2020/2021 **Design Stream**

Year of Study	Number of Academic Units (AUs)										
	ME CORE (C)	ECONS CORE (EC)	ME MAJOR PE (PE)	ECONS ELECTIVE (EPE)	General Education Requirement (GER)					Total	
					Core (GC)	Prescribed Electives					UE
						LA	STS	BM	ANY		
1	25	12	-	-	8	-	-	-	-	-	45
2	27	9	-	-	4	-	-	-	-	-	40
3	26	-	-	3	-	-	-	-	-	-	29
4	4	4	6	18	2	-	-	-	-	-	34
5	8	-	6	18	-	-	-	-	-	-	32
Total	90	25	12	39	14	0				0	180

Course Code and Title	Type	AU	Pre-requisite/ Remarks
YEAR 1 SEMESTER 1			
MH1810 Mathematics I	C	3	
PH1011 Physics	C	3	PH1011: 'A' level Physics
OR PH1012 Physics A		4	
FE1073 Introduction to Engineering & Practices	C	1	
MA2003 Introduction to Thermo-fluids	C	3	
HE1001 Microeconomics Principles	EC	3	
HE1002 Macroeconomics Principles	EC	3	
HW0188 Effective Communication	GC	2	HW0001 (co-requisite)
GC0001 Sustainability: Seeing Through The Haze	GC	1	
ET0001 Enterprise & Innovation	GC	1	
HY0001 Ethics and Moral Reasoning	GC	1	
Total		21	
YEAR 1 SEMESTER 2			
MH1811 Mathematics II	C	3	
MA1001 Dynamics	C	3	Having read PH1011/PH1012/CY1305 and MH1810/MH2812/ CY1201
MA1008 Introduction to Computational Thinking	C	3	
MA2001 Mechanics of Materials	C	3	
Engineering Fundamentals 2	C	3	
EG0001 Engineers and Society	GC	3	
HE1005 Introduction to Probability and Statistical Inference	EC	3	
HE2002 Intermediate Macroeconomics	EC	3	HE1002/AB9091/HE9091
Total		24	
YEAR 2 SEMESTER 1			
MA2002 Theory of Mechanism	C	3	MA1001
MA2004 Manufacturing Processes	C	3	
MA2006 Engineering Mathematics	C	3	(MH1810 & MH1811)/ MH2812/CY1203
MA2009 Introduction to Electrical Circuits & Electronic Devices	C	3	
MA2014 Product Presentation	C	3	
HE2005 Principles of Econometrics	EC	3	HE1005
ML0003 Kickstart Your Career Success	GC	1	
Total		19	
YEAR 2 SEMESTER 2			
MA2005 Engineering Graphics	C	3	
MA2013 Creative Thinking and Design	C	3	
MA2071 Laboratory Experiments (ME)	C	1	
MA2079 Engineering Innovation and Design	C	2	Semester 2 with 1 week in Special Term
MA3002 Solid Mechanics and Vibration	C	3	MA2001
HE2001 Intermediate Microeconomics	EC	3	
HE3021 Intermediate Econometrics	EC	3	HE2005
MA0218 Introduction to Data Science and Artificial Intelligence	GC	3	
Total		21	

YEAR 3 SEMESTER 1			
MA3001 Machine Element Design	C	3	Having read MA2001 and MA2002
MA3004 Mathematical Methods in Engineering	C	3	(MH1810 & MH1811)/MH2812/CY1203
MA3005 Control Theory	C	3	Having read MA2006
MA3006 Fluid Mechanics	C	3	MA2003
MA3010 Thermodynamics & Heat Transfer	C	3	MA2003
MA3071 Engineering Experiments (ME)	C	1	
Economics Elective 1	EPE	3	
Total		19	
YEAR 3 SEMESTER 2			
MA3080 Professional Internship	C	10	Students may do MA3075 Professional Attachment in Year 2 Special Semester (5 AU) and UE courses in any semester (5 AU) instead of MA3080.
Total		10	
YEAR 4 SEMESTER 1			
MA4011 Engineering Product Design	C	4	Having read MA3001
MA48XX Major-PE 1	PE	3	
HE4010 Singapore Economy in a Globalized World	EC	4	HE2001 & HE2002
Economics Elective 2	EPE	3	
Economics Elective 3	EPE	3	
Total		17	
YEAR 4 SEMESTER 2			
MA48XX Major-PE 2	PE	3	
Economics Elective 4	EPE	3	
Economics Elective 5	EPE	3	
Economics Elective 6	EPE	3	
Economics Elective 7	EPE	3	
HW0288 Engineering Communication	GC	2	HW0188
Total		17	
YEAR 5 SEMESTER 1			
MA4079 Final Year Project	C	4	Year 4 standing, 2 semesters
MA48XX Major-PE 3	PE	3	
Economics Elective 8	EPE	3	
Economics Elective 9	EPE	4	
Economics Elective 10	EPE	4	
Total		18	
YEAR 5 SEMESTER 2			
MA4079 Final Year Project	C	4	Year 4 standing, 2 semesters
MA48XX Major-PE 4	PE	3	
Economics Elective 11	EPE	4	
Economics Elective 12	EPE	3	
Total		14	
GRAND TOTAL (Year 1 to 5)		180	

AU Requirement for Double Degree Programme (DDP)

Bachelor of Engineering (Mechanical Engineering) and Bachelor of Social Science (Economics)

Students admitted from AY2020/2021 **Robotics and Mechatronics Stream**

Year of Study	Number of Academic Units (AUs)										
	ME CORE (C)	ECONS CORE (EC)	ME MAJOR PE (PE)	ECONS ELECTIVE (EPE)	General Education Requirement (GER)					Total	
					Core (GC)	Prescribed Electives					UE
						LA	STS	BM	ANY		
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Total	90	25	12	39	14	0				0	180

Course Code and Title	Type	AU	Pre-requisite/ Remarks
YEAR 1 SEMESTER 1			
MH1810 Mathematics I	C	3	
PH1011 Physics	C	3	PH1011: 'A' level Physics
OR PH1012 Physics A		4	
FE1073 Introduction to Engineering & Practices	C	1	
MA2003 Introduction to Thermo-fluids	C	3	
HE1001 Microeconomics Principles	EC	3	
HE1002 Macroeconomics Principles	EC	3	
HW0188 Effective Communication	GC	2	HW0001 (co-requisite)
GC0001 Sustainability: Seeing Through The Haze	GC	1	
ET0001 Enterprise & Innovation	GC	1	
HY0001 Ethics and Moral Reasoning	GC	1	
Total		21	
YEAR 1 SEMESTER 2			
MH1811 Mathematics II	C	3	
MA1001 Dynamics	C	3	Having read PH1011/PH1012/CY1305 and MH1810/MH2812/ CY1201
MA1008 Introduction to Computational Thinking	C	3	
MA2001 Mechanics of Materials	C	3	
Engineering Fundamentals 2	C	3	
EG0001 Engineers and Society	GC	3	
HE1005 Introduction to Probability and Statistical Inference	EC	3	
HE2002 Intermediate Macroeconomics	EC	3	HE1002/AB9091/HE9091
Total		24	
YEAR 2 SEMESTER 1			
MA2002 Theory of Mechanism	C	3	MA1001
MA2004 Manufacturing Processes	C	3	
MA2006 Engineering Mathematics	C	3	(MH1810 & MH1811)/ MH2812/CY1203
MA2009 Introduction to Electrical Circuits & Electronic Devices	C	3	
MA2012 Introduction to Mechatronics System Design	C	3	
HE2005 Principles of Econometrics	EC	3	HE1005
ML0003 Kickstart Your Career Success	GC	1	
Total		19	
YEAR 2 SEMESTER 2			
MA2005 Engineering Graphics	C	3	
MA2011 Mechatronics Systems Interfacing	C	3	
MA2071 Laboratory Experiments (ME)	C	1	
MA2079 Engineering Innovation and Design	C	2	Semester 2 with 1 week in Special Term
MA3002 Solid Mechanics and Vibration	C	3	MA2001
HE2001 Intermediate Microeconomics	EC	3	
HE3021 Intermediate Econometrics	EC	3	HE2005
MA0218 Introduction to Data Science and Artificial Intelligence	GC	3	
Total		21	

YEAR 3 SEMESTER 1			
MA3001 Machine Element Design	C	3	Having read MA2001 and MA2002
MA3004 Mathematical Methods in Engineering	C	3	(MH1810 & MH1811)/ MH2812/CY1203
MA3005 Control Theory	C	3	Having read MA2006
MA3006 Fluid Mechanics	C	3	MA2003
MA3010 Thermodynamics & Heat Transfer	C	3	MA2003
MA3071 Engineering Experiments (ME)	C	1	
Economics Elective 1	EPE	3	
Total		19	
YEAR 3 SEMESTER 2			
MA3080 Professional Internship	C	10	Students may do MA3075 Professional Attachment in Year 2 Special Semester (5 AU) and UE courses in any semester (5 AU) instead of MA3080.
Total		10	
YEAR 4 SEMESTER 1			
MA48XX Major-PE 1	PE	3	
MA48XX Major-PE 2	PE	3	
HE4010 Singapore Economy in a Globalized World	EC	4	HE2001 & HE2002
Economics Elective 2	EPE	3	
Economics Elective 3	EPE	3	
Total		16	
YEAR 4 SEMESTER 2			
MA4012 Mechatronics Engineering Design	C	4	Having read MA3001
Economics Elective 4	EPE	3	
Economics Elective 5	EPE	3	
Economics Elective 6	EPE	3	
Economics Elective 7	EPE	3	
HW0288 Engineering Communication	GC	2	HW0188
Total		18	
YEAR 5 SEMESTER 1			
MA4079 Final Year Project	C	4	Year 4 standing, 2 semesters
MA48XX Major-PE 3	PE	3	
Economics Elective 8	EPE	3	
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MA4079 Final Year Project	C	4	Year 4 standing, 2 semesters
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Economics Elective 11	EPE	4	
Economics Elective 12	EPE	3	
Total		14	
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