SECOND MAJOR PROGRAMME

Degree in Bachelor of Engineering (MECHANICAL ENGINEERING) Programme (FULL-Time)

SECOND MAJOR in Society & Urban Systems

For students admitted to FULL-TIME B.ENG (ME) with Second Major in Society & Urban Systems in AY2018/2019 - YEAR 1 (Mainstream) (Professional Internship)

		Number of Academic Units (AUs)											
Year of				General Education Requirement (GER)									
Study	Core	Major PE	Coro	I	Prescribed E	Electives (P	E)	ПЕ	Total				
			Core	LA	STS	BM	ANY	UE					
1	25	-	3	-	-	-	-	12	40				
2	24	-	8	-	-	-	-	12	44				
3	26	-	3	-	-	-	-	3	32				
4	15	12	-	-	-	-	-	9	36				
<u>Total</u>	90	12	14			36	152						

For students admitted to FULL-TIME B.ENG (ME) with Second Major in Society & Urban Systems in AY2018/2019 - YEAR 1 (Mainstream) (Optional PA)

	Number of Academic Units (AUs)										
Year of			General Education Requirement (GER)								
Study	Core	Major PE	Core	F	Prescribed E	E)	ШЕ	Total			
			Core	LA	UE						
1	22	-	3	-	-	-	-	12	37		
2	32	-	5	-	-	-	-	12	49		
3	16	3	6	-	-	-	-	11	36		
4	15	9	-	-	-	-	-	6	30		
<u>Total</u>	85	12	14		41	152					

For students admitted to FULL-TIME B.ENG (ME) with Second Major in Society & Urban Systems in AY2018/2019 - YEAR 1 (Design Stream) (Professional Internship)

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			Number of Academic Units (AUs)										
Year of													
Study	Core	Major PE	Core		Prescribed I	Electives (P	E)	UE	Total 40				
			Core	LA	STS	BM	ANY	UE					
1	25	-	3	-	-	-	-	12	40				
2	27	-	5	-	-	-	-	12	44				
3	23	-	6	-	-	-	-	3	32				
4	15	12	-	-	-	-	-	9	36				
<u>Total</u>	90	12	14		36	152							

For students admitted to FULL-TIME B.ENG (ME) with Second Major in Society & Urban Systems in AY2018/2019 - YEAR 1 (Design Stream) (Optional PA)

	Number of Academic Units (AUs)											
Year of			General Education Requirement (GER)									
Study	Core	Major PE	Coro		Prescribed E	Electives (P	E)	ПЕ	Total			
			Core	LA	STS	BM	ANY	UE				
1	22	-	3	-	-	-	-	12	37			
2	32	-	5	-	-	-	-	12	49			
3	19	3	6	-	-	-	-	8	36			
4	12	9	-	-	-	-	-	9	30			
<u>Total</u>	85	12	14		0 41							

For students admitted to FULL-TIME B.ENG (ME) with Second Major in Society & Urban Systems in AY2018/2019 - YEAR 1 (Robotics and Mechatronics Stream) (Professional Internship)

		Number of Academic Units (AUs)											
Year of				General Education Requirement (GER)									
Study	Core	Major PE	Core		E)	UE	Total						
			Core	LA	STS	BM	ANY	UE					
1	25	-	3	-	-	-	-	12	40				
2	27	-	5	-	-	-	-	12	44				
3	23	-	6	-	-	-	-	3	32				
4	15	12	•	-	-	-	-	9	36				
<u>Total</u>	90	12	14			36	152						

For students admitted to FULL-TIME B.ENG (ME) with Second Major in Society & Urban Systems in AY2018/2019 - YEAR 1 (Robotics and Mechatronics Stream) (Optional PA)

				Number of	Academic U	Inits (AUs)			
Year of				Genera	l Education	Requireme	nt (GER)		
Study	Core	Major PE	Core	F	Prescribed E	Electives (P	E)	UE	Total
			Core	LA	UE				
1	22	-	3	-	-	-	-	12	37
2	32	-	5	-	-	-	-	12	49
3	19	3	6	-	-	-	-	8	36
4	12	9	-	-	-	-	-	9	30
<u>Total</u>	85	12	14		152				

Degree in Bachelor of Engineering (MECHANICAL ENGINEERING) Programme with SECOND MAJOR IN SOCIETY & URBAN SYSTEMS (FULL-Time) (Professional Internship)

For students admitted to FULL-TIME B.ENG in AY2018/2019 (Mainstream)

Course Code and Title	Туре	No	of Hour	s Per W	/eek	AU	Pre-requisite/ Remarks
		Lec	Tut	Lab	Total		
YEAR 1 SEMESTER 1							
MH1810 Mathematics I	С	2	1	-	3	3	
MA1008 Introduction to Computational Thinking	С	TBA	TBA	TBA	TBA	3	
PH1011 Physics	С	2	1	-	3	3	PH1011: 'A' level Physics
OR PH1012 Physics A		3	1	-	4	4	
FE1073 Introduction to Engineering and Practices	С	-	-	-	1	1	
HE9091 Principles of Economics	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Society and Culture #1	UE	2	1	-	3	3	
HW0188 Engineering Communication I	GC	-	2	-	2	2	HW0001 (co-requisite)
GC0001 Introduction to Sustainability: Multidisciplinary Approaches and Solutions	GC	_	1	-	1	1	Online, Sem 1 only
Total						19	
YEAR 1 SEMESTER 2							
MH1811 Mathematics II	С	3	-	-	3	3	
MA1001 Dynamics	С	2	1	-	3	3	Having read PH1011/PH1012/CY1305 and MH1810/MH2812/ CY1201
MA1002 Fundamental Engineering Materials	С	2	1	-	3	3	
MA2001 Mechanics of Materials	С	2	1	-	3	3	
MA2003 Introduction to Thermo-fluids	С	2	1	-	3	3	
Society & Urban System Specialization Track: Society and Culture #2	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Urban Economics and Public Policy #1	UE	2	1	-	3	3	
Total						21	

YEAR 2 SEMESTER 1							
MA2002 Theory of Mechanism	С	2	1	-	3	3	MA1001
MA2004 Manufacturing Process	С	2	1	-	3	3	
MA2006 Engineering Mathematics	С	2	1	-	3	3	(MH1810 & MH1811) MH2812/CY1203
MA2009 Introduction to Electrical Circuits and Electronics	С	2	1	ı	3	3	
US2001 Urban Planning & Design	UE	2	1	-	3	3	
Society & Urban System Specialization Track:							
Urban Economics and Public Policy #2	UE	2	1	-	3	3	
Society & Urban System Specialization Track:							
Water and Environmental Management #1	UE	2	1	-	3	3	
HY0001 Ethics and Moral Reasoning	GC	-	1	-	1	1	Online, Sem 1 Only
ML0003 Career Course	GC	TBA	TBA	TBA	TBA	1	Online
Total						23	
YEAR 2 SEMESTER 2		T -			T .	1 -	T
MA0101 Engineers and Society	GC	2	1	-	3	3	
MA2005 Engineering Graphics	С	2	-	3	5	3	Semester 1 for AE students
MA2007 Thermodynamics	С	2	1	-	3	3	MA2003
MA2071 Laboratory Experiments (ME)	С	-	-	3	3	1	
MA2079 Engineering Innovation and Design	С	2	-	1	2	2	Semester 2 with 1 week in Special Term
MA3006 Fluid Mechanics	С	2	1	-	3	3	MA2003
Society & Urban System Specialization Track:							
Urban Economics and Public Policy #3	UE	2	1	-	3	3	
Data Science and Artificial Intelligence	GC	TBA	TBA	TBA	TBA	3	
Total						21	
YEAR 3 SEMESTER 1		1			1	1	I
MA3001 Machine Element Design	С	2	-	3	5	3	Having read MA2001 8 MA2002
MA3002 Solid Mechanics and Vibration	С	2	1	-	3	3	MA2001
MA3003 Heat Transfer	С	2	1	-	3	3	MA2007
MA3004 Mathematical Methods in	С	2	1	-	3	3	(MH1810 & MH1811)
Engineering							MH2812/CY1203
MA3005 Control Theory	С	2	1	-	3	3	Having read MA2006
MA3071 Engineering Experiments (ME)	С	-	-	3	3	1	
HW0288 Engineering Communication II	GC	-	2	-	2	2	HW0188 Engineering Communication I
US3001 Integrated Urban Management	UE	2	1	-	3	3	
ET0001 Entrepreneurship and Innovation	GC	-	1	-	1	1	Online, Sem 1 only
Total						22	
YEAR 3 SEMESTER 2							
MA3080 Professional Internship	С	-	-	-	-	10	
Total						10	

YEAR 4 SEMESTER 1							
MA4079 Final Year Project	С	-	-	4	4	4	Year 4 standing, 2 semesters
MA4001 Engineering Design	С	3	-	3	6	4	Having read MA3001
MA4002 Fluid Dynamics	С	3	-	-	3	3	MA3006
MA48XX Major-PE 1	PE	3	-	-	3	3	
MA48XX Major-PE 2	PE	3	-	-	3	3	
US4001 Leaders in Urban Systems and Policy	UE	2	1	-	3	3	
Total						20	
YEAR 4 SEMESTER 2							
MA4079 Final Year Project	С	-	-	4	4	4	Year 4 standing, 2 semesters
MA48XX Major-PE 3	PE	3	-	-	3	3	
MA48XX Major-PE 4	PE	3	-	-	3	3	
Society & Urban System Specialization Track: Water and Environmental Management #2	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Society and Culture #3	UE	2	1	-	3	3	
Total						16	
GRAND TOTAL (Year 1 to 4)						152	

Degree in Bachelor of Engineering (MECHANICAL ENGINEERING) Programme with SECOND MAJOR IN SOCIETY & URBAN SYSTEMS (FULL-Time) (Optional PA)

For students admitted to FULL-TIME B.ENG in AY2018/2019 (Mainstream)

Course Code and Title	Туре	No	of Hour	s Per W	/eek	AU	Pre-requisite/ Remarks
	,,,,,	Lec	Tut	Lab	Total		The requience, members
YEAR 1 SEMESTER 1							
MH1810 Mathematics I	С	2	1	-	3	3	
MA1008 Introduction to Computational	С	TBA	TBA	TBA	TBA	3	
Thinking							
PH1011 Physics	С	2	1	-	3	3	PH1011: 'A' level Physics
OR PH1012 Physics A		3	1	-	4	4	
FE1073 Introduction to Engineering and	С	_	_	_	1	1	
Practices	C				Τ.	т.	
HE9091 Principles of Economics	UE	2	1	-	3	3	
Society & Urban System Specialization Track:	UE	2	1	_	3	3	
Society and Culture #1	0.				Ĵ		
GC0001 Introduction to Sustainability:						_	Online, Sem 1 only
Multidisciplinary Approaches and Solutions	GC	-	1	-	1	1	
Total						17	
YEAR 1 SEMESTER 2					•		
MH1811 Mathematics II	С	3	-	-	3	3	
							Having read
MA1001 Dynamics	С	2	1	-	3	3	PH1011/PH1012/CY1305 and
,							MH1810/MH2812/ CY1201
MA1002 Fundamental Engineering Materials	С	2	1	_	3	3	
MA2003 Introduction to Thermo-fluids	С	2	1	_	3	3	
Society & Urban System Specialization Track:					,		
Society and Culture #2	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Urban Economics and Public Policy #1	UE	2	1	-	3	3	
HW0188 Engineering Communication I	GC	-	2	-	2	2	HW0001 (co-requisite)
ML0001 Absolute Basics in Career	GC	-	1	-	1	1	Online, Sem 2 only
ML0003 Career Course	GC	TBA	TBA	TBA	TBA	1	Online
Total						22	
	•						
YEAR 2 SEMESTER 1							
MA2001 Mechanics of Materials	С	2	1	-	3	3	
MA2002 Theory of Mechanism	С	2	1	_	3	3	MA1001
MA2004 Manufacturing Process	С	2	1	_	3	3	
US2001 Urban Planning & Design	UE	2	1	-	3	3	
Society & Urban System Specialization Track:	UE	2	1	_	3	3	
Urban Economics and Public Policy #2 Society & Urban System Specialization Track:	OL				3		
Water and Environmental Management #1	UE	2	1	_	3	3	
HY0001 Ethics and Moral Reasoning	GC	-	1	_	1	1	Online, Sem 1 Only
	50				_		onanc, och i omy
Total Please refer here for specialised elective o						19	

Please refer <u>here</u> for specialised elective courses.

YEAR 2 SEMESTER 2							
MA2005 Engineering Graphics	С	2	-	3	5	3	Semester 1 for AE students
MA2006 Engineering Mathematics	С	2	1	-	3	3	(MH1810 & MH1811), MH2812/CY1203
MA2007 Thermodynamics	С	2	1	-	3	3	MA2003
MA2009 Introduction to Electrical Circuits and Electronics	С	2	1	-	3	3	
MA2071 Laboratory Experiments (ME)	С	-		3	3	1	
MA2079 Engineering Innovation and Design	С	2	-	-	2	2	Semester 2 with 1 week ir Special Term
MA3006 Fluid Mechanics	С	2	1	-	3	3	MA2003
Society & Urban System Specialization Track: Urban Economics and Public Policy #3	UE	2	1	ı	3	3	
Data Science and Artificial Intelligence	GC	TBA	TBA	TBA	TBA	3	
Total						24	
YEAR 2 SPECIAL SEMESTER							
MA3075 Professional Attachment	С	-	-	-	-	5	
Total						5	
YEAR 3 SEMESTER 1			•		•	•	
MA3001 Machine Element Design	С	2	-	3	5	3	Having read MA2001 8 MA2002
MA3002 Solid Mechanics and Vibration	С	2	1	-	3	3	MA2001
MA3003 Heat Transfer	С	2	1	-	3	3	MA2007
MA3004 Mathematical Methods in Engineering	С	2	1	-	3	3	(MH1810 & MH1811), MH2812/CY1203
US3001 Integrated Urban Management	UE	2	1	-	3	3	
ET0001 Entrepreneurship and Innovation	GC	-	1	-	1	1	Online, Sem 1 only
Unrestricted Elective (UE) 1	UE	3	-	-	3	3	
Total						19	
YEAR 3 SEMESTER 2		T -	Ι.		Ι.	Ι.	
MA0101 Engineers and Society	GC	2	1	-	3	3	
MA3005 Control Theory	С	2	1	-	3	3	Having read MA2006
MA3071 Engineering Experiments (ME)	С	-	-	3	3	1	
MA48XX Major-PE 1	PE	3	-	-	3	3	
Society & Urban System Specialization Track: Water and Environmental Management #2	UE	2	1	-	3	3	
HW0288 Engineering Communication II	GC	-	2	-	2	2	HW0188 Engineering Communication I
Unrestricted Elective (UE) 2	UE	2	-	-	2	2	
Total						17	

YEAR 4 SEMESTER 1							
MA4079 Final Year Project	С	-	1	4	4	4	Year 4 standing, 2 semesters
MA4001 Engineering Design	С	3	1	3	6	4	Having read MA3001
MA4002 Fluid Dynamics	С	3	-	-	3	3	MA3006
MA48XX Major-PE 2	PE	3	-	-	3	3	
US4001 Leaders in Urban Systems and Policy	UE	2	1	ı	3	3	
Total						17	
YEAR 4 SEMESTER 2							
MA4079 Final Year Project	С	-	-	4	4	4	Year 4 standing, 2 semesters
MA48XX Major-PE 3	PE	3	-	-	3	3	
MA48XX Major-PE 4	PE	3	-	-	3	3	
Society & Urban System Specialization Track: Society and Culture #3	UE	2	1	ı	3	3	
Total						13	
GRAND TOTAL (Year 1 to 4)						152	

Degree in Bachelor of Engineering (MECHANICAL ENGINEERING) Programme with SECOND MAJOR IN SOCIETY & URBAN SYSTEMS (FULL-Time) (Professional Internship)

For students admitted to FULL-TIME B.ENG in AY2018/2019 (Design Stream)

Course Code and Title	Туре	No	of Hour	s Per W	/eek	AU	Pre-requisite/ Remarks
	7,60	Lec	Tut	Lab	Total		,
YEAR 1 SEMESTER 1							
MH1810 Mathematics I	С	2	1	-	3	3	
MA1008 Introduction to Computational Thinking	С	TBA	TBA	TBA	TBA	3	
PH1011 Physics	С	2	1	-	3	3	PH1011: 'A' level Physics
OR PH1012 Physics A		3	1	-	4	4	
FE1073 Introduction to Engineering and Practices	С	-	-	-	1	1	
HE9091 Principles of Economics	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Society and Culture #1	UE	2	1	ı	3	3	
HW0188 Engineering Communication I	GC	-	2	-	2	2	HW0001 (co-requisite)
GC0001 Introduction to Sustainability: Multidisciplinary Approaches and Solutions	GC	-	1	-	1	1	Online, Sem 1 only
Total						19	
YEAR 1 SEMESTER 2							
MH1811 Mathematics II	С	3	-	-	3	3	
MA1001 Dynamics	С	2	1	-	3	3	Having read PH1011/PH1012/CY1305 and MH1810/MH2812/ CY1201
MA1002 Fundamental Engineering Materials	С	2	1	-	3	3	
MA2001 Mechanics of Materials	С	2	1	-	3	3	
MA2003 Introduction to Thermo-fluids	С	2	1	-	3	3	
Society & Urban System Specialization Track: Society and Culture #2	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Urban Economics and Public Policy #1	UE	2	1	ı	3	3	
Total						21	

YEAR 2 SEMESTER 1							
MA2002 Theory of Mechanism	С	2	1	-	3	3	MA1001
MA2004 Manufacturing Process	С	2	1	-	3	3	
MA2009 Introduction to Electrical Circuits and Electronics	С	2	1	-	3	3	
MA2014 Product Presentation	С	2	-	2	4	3	
US2001 Urban Planning & Design	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Urban Economics and Public Policy #2	UE	2	1	1	3	3	
Society & Urban System Specialization Track: Water and Environmental Management #1	UE	2	1	ı	3	3	
HY0001 Ethics and Moral Reasoning	GC	-	1	-	1	1	Online, Sem 1 Only
ML0003 Career Course	GC	TBA	TBA	TBA	TBA	1	Online
Total						23	
WEAR 2 CENTICITED 2							
YEAR 2 SEMESTER 2 MA2005 Engineering Graphics	С	2	_	3	5	3	Semester 1 for AE students
				3			(MH1810 & MH1811
MA2006 Engineering Mathematics	С	2	1	-	3	3	MH2812/CY1203
MA2013 Creative Thinking and Design	С	2	-	2	4	3	
MA2071 Laboratory Experiments (ME)	С	-	-	3	3	1	
MA2079 Engineering Innovation and Design	С	2	-	-	2	2	Semester 2 with 1 week i Special Term
MA3006 Fluid Mechanics	С	2	1	-	3	3	MA2003
Society & Urban System Specialization Track: Urban Economics and Public Policy #3	UE	2	1	-	3	3	
Data Science and Artificial Intelligence	GC	TBA	TBA	TBA	TBA	3	
Total						21	
WEAR 2 CENTECTER 4							
YEAR 3 SEMESTER 1	GC	٦ .	1		٦ .		T
MA0101 Engineers and Society MA3001 Machine Element Design	C	2	-	3	3 5	3	Having read MA2001
MA3002 Solid Mechanics and Vibration	С	2	1	_	3	3	MA2002 MA2001
MA3002 Solid Mechanics and Vibration MA3004 Mathematical Methods in			1	-	3		(MH1810 & MH1811
Engineering	С	2	1	i	3	3	MH2812/CY1203
MA3005 Control Theory	С	2	1	-	3	3	Having read MA2006
MA3071 Engineering Experiments (ME)	С	-	-	3	3	1	
HW0288 Engineering Communication II	GC	-	2	-	2	2	HW0188 Engineerir Communication I
US3001 Integrated Urban Management	UE	2	1	-	3	3	
ET0001 Entrepreneurship and Innovation	GC	-	1	ı	1	1	Online, Sem 1 only
Total						22	
YEAR 3 SEMESTER 2		ı				4.5	T
MA3080 Professional Internship	С	-	-	-	-	10	
Total						10	

YEAR 4 SEMESTER 1							
MA4079 Final Year Project	С	-	-	4	4	4	Year 4 standing, 2 semesters
MA3010 Thermodynamics & Heat Transfer	С	2	1	-	3	3	MA2003
MA4011 Engineering Product Design	С	3	-	3	6	4	Having read MA3001
MA48XX Major-PE 1	PE	3	-	-	3	3	
MA48XX Major-PE 2	PE	3	-	-	3	3	
US4001 Leaders in Urban Systems and Policy	UE	2	1	-	3	3	
Total						20	
YEAR 4 SEMESTER 2 MA4079 Final Year Project	С	-	-	4	4	4	Year 4 standing, 2 semesters
MA48XX Major-PE 3	PE	3	-	-	3	3	2 Jennesters
MA48XX Major-PE 4	PE	3	-	-	3	3	
Society & Urban System Specialization Track: Water and Environmental Management #2	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Society and Culture #3	UE	2	1	-	3	3	
Total						16	

Degree in Bachelor of Engineering (MECHANICAL ENGINEERING) Programme with SECOND MAJOR IN SOCIETY & URBAN SYSTEMS (FULL-Time) (Optional PA)

For students admitted to FULL-TIME B.ENG in AY2018/2019 (Design Stream)

Course Code and Title	Туре	No	of Hour	s Per W	/eek	AU	Pre-requisite/ Remarks	
course code and Thic	Type	Lec	Tut	Lab	Total	ΑΟ		
YEAR 1 SEMESTER 1								
MH1810 Mathematics I	С	2	1	-	3	3		
MA1008 Introduction to Computational	С	TBA	TBA	TBA	TBA	3		
Thinking								
PH1011 Physics	С	2	1	-	3	3	PH1011: 'A' level Physics	
OR PH1012 Physics A		3	1	-	4	4		
FE1073 Introduction to Engineering and	С	-	-	-	1	1		
Practices HE9091 Principles of Economics	UE	2	1	_	3	3		
Society & Urban System Specialization Track:	UE		1	-	3	3		
Society and Culture #1	UE	2	1	-	3	3		
HW0188 Engineering Communication I	GC	-	2	-	2	2	HW0001 (co-requisite)	
							(11 14 11)	
GC0001 Introduction to Sustainability: Multidisciplinary Approaches and Solutions	GC	-	1	-	1	1	Online, Sem 1 only	
Total						19		
				•				
YEAR 1 SEMESTER 2								
MH1811 Mathematics II	С	3	-	-	3	3		
MA1001 Dynamics	С	2	1	-	3	3	Having read PH1011/PH1012/CY1305 and MH1810/MH2812/ CY1201	
MA1002 Fundamental Engineering Materials	С	2	1	-	3	3		
MA2003 Introduction to Thermo-fluids	С	2	1	_	3	3		
Society & Urban System Specialization Track:								
Society and Culture #2	UE	2	1	-	3	3		
Society & Urban System Specialization Track:								
Urban Economics and Public Policy #1	UE	2	1	-	3	3		
Total						18		
YEAR 2 SEMESTER 1								
MA2001 Mechanics of Materials	С	2	1	-	3	3		
MA2002 Theory of Mechanism	С	2	1	-	3	3	MA1001	
MA2004 Manufacturing Process	С	2	1	-	3	3		
MA2014 Product Presentation	С	2	-	2	4	3		
US2001 Urban Planning & Design	UE	2	1	-	3	3		
Society & Urban System Specialization Track:								
Water and Environmental Management #1	UE	2	1	-	3	3		
HY0001 Ethics and Moral Reasoning	GC	-	1	-	1	1	Online, Sem 1 Only	
ML0003 Career Course	GC	TBA	TBA	TBA	TBA	1	Online	

Please refer <u>here</u> for specialised elective courses.

				•	_	
С	2	-	3	5	3	Semester 1 for AE students
С	2	1	-	3	3	(MH1810 & MH1811), MH2812/CY1203
С	2	1	-	3	3	
С	2	-	2	4	3	
С	-	-	3	3	1	
С	2	ı	-	2	2	Semester 2 with 1 week in Special Term
UE	2	1	-	3	3	
UE	2	1	ı	3	3	
GC	TBA	TBA	TBA	TBA	3	Online
					24	
•					-	
С	-	-	-	-	5	
					5	
I	ı			Ī	ı	Haring was AAA 2004
С	2	-	3	5	3	Having read MA2001 8 MA2002
С	2	1	-	3	3	MA2001
С	2	1	-	3	3	(MH1810 & MH1811) MH2812/CY1203
С	2	1	-	3	3	MA2003
UE	2	1	-	3	3	
UE	3	-	-	3	3	
GC	-	1	-	1	1	Online, Sem 1 only
					19	
T				Ι .		1
						LL : LAAA200C
ļ						Having read MA2006
1						MA2003
1		-			1	
GC PE	- -	2	-	2	2	HW0188 Engineering
GC						
UE	2	_	_	2	2	Communication I
	C C C UE C C UE UE	C 2 C 2 C 2 C 2 C 2 C 2 C 3 C 4 C 2 C 5 C 7 C 2 C 7 C 7 C 7 C 7 C 7 C 7 C 7 C 7 C 7 C 7	C 2 1 C 2 - C C 2 1 UE 2 1 GC TBA TBA C 2 1 C 2 1 C 2 1 C 2 1 C 3 1 C 4 1 C 5 1 C 7 1	C 2 1 - C 2 7 3 C 2 7 7 3 C 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	C 2 1 - 3 C 2 7 2 4 C 7 7 3 3 C 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	C 2 1 - 3 3 3 C 2 1 C 2 1 C 2 C 2 C 2 C 2 C 2 C 2 C 2

YEAR 4 SEMESTER 1							
MA4079 Final Year Project	С	-	-	4	4	4	Year 4 standing, 2 semesters
MA4011 Engineering Product Design	С	3	1	3	6	4	Having read MA3001
MA48XX Major-PE 2	PE	3	-	-	3	3	
US4001 Leaders in Urban Systems and Policy	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Water and Environmental Management #2	UE	2	1	-	3	3	
Total						17	
YEAR 4 SEMESTER 2							
MA4079 Final Year Project	С	ı	ı	4	4	4	Year 4 standing, 2 semesters
MA48XX Major-PE 3	PE	3	-	-	3	3	
MA48XX Major-PE 4	PE	3	-	-	3	3	
Society & Urban System Specialization Track: Society and Culture #3	UE	2	1	-	3	3	
Total						13	
GRAND TOTAL (Year 1 to 4)						152	

Degree in Bachelor of Engineering (MECHANICAL ENGINEERING) Programme with SECOND MAJOR IN SOCIETY & URBAN SYSTEMS (FULL-Time) (Professional Internship)

For students admitted to FULL-TIME B.ENG in AY2018/2019 (Robotics and Mechatronics Stream)

Course Code and Title	Туре	No	of Hour	s Per W	/eek	AU	Pre-requisite/ Remarks
	.,,,,	Lec	Tut	Lab	Total		Tro requience, memanie
YEAR 1 SEMESTER 1							
MH1810 Mathematics I	С	2	1	-	3	3	
MA1008 Introduction to Computational Thinking	С	TBA	TBA	ТВА	TBA	3	
PH1011 Physics	С	2	1	-	3	3	PH1011: 'A' level Physics
OR PH1012 Physics A		3	1	-	4	4	
FE1073 Introduction to Engineering and Practices	С	-	1	-	1	1	
HE9091 Principles of Economics	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Society and Culture #1	UE	2	1	-	3	3	
HW0188 Engineering Communication I	GC	-	2	-	2	2	HW0001 (co-requisite)
GC0001 Introduction to Sustainability: Multidisciplinary Approaches and Solutions	GC	-	1	-	1	1	Online, Sem 1 only
Total						19	
YEAR 1 SEMESTER 2							
MH1811 Mathematics II	С	3	-	-	3	3	
MA1001 Dynamics	С	2	1	1	3	3	Having read PH1011/PH1012/CY1305 and MH1810/MH2812/ CY1201
MA1002 Fundamental Engineering Materials	С	2	1	-	3	3	
MA2001 Mechanics of Materials	С	2	1	-	3	3	
MA2003 Introduction to Thermo-fluids	С	2	1	-	3	3	
Society & Urban System Specialization Track: Society and Culture #2	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Urban Economics and Public Policy #1	UE	2	1	ı	3	3	
Total						21	

YEAR 2 SEMESTER 1							
MA2002 Theory of Mechanism	С	2	1	-	3	3	MA1001
MA2004 Manufacturing Process	С	2	1	-	3	3	
MA2009 Introduction to Electrical Circuits and Electronics	С	2	1	-	3	3	
MA2011 Mechatronics Systems Interfacing	С	2	1	-	3	3	
US2001 Urban Planning & Design	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Urban Economics and Public Policy #2	UE	2	1	ı	3	3	
Society & Urban System Specialization Track: Water and Environmental Management #1	UE	2	1	-	3	3	
HY0001 Ethics and Moral Reasoning	GC	-	1	-	1	1	Online, Sem 1 Only
ML0003 Career Course	GC	TBA	TBA	TBA	TBA	1	Online
Total						23	
WEAR & CELASOTER &							
YEAR 2 SEMESTER 2 MA2005 Engineering Graphics	С	2	-	3	5	3	Semester 1 for AE students
				3			(MH1810 & MH1811
MA2006 Engineering Mathematics	С	2	1	-	3	3	MH2812/CY1203
MA2012 Introduction to Mechatronics Systems Design	С	1	1	3	5	3	
MA2071 Laboratory Experiments (ME)	С	-	-	3	3	1	
MA2079 Engineering Innovation and Design	С	2	-	-	2	2	Semester 2 with 1 week Special Term
MA3006 Fluid Mechanics	С	2	1	-	3	3	MA2003
Society & Urban System Specialization Track: Urban Economics and Public Policy #3	UE	2	1	-	3	3	
Data Science and Artificial Intelligence	GC	TBA	TBA	TBA	TBA	3	Online
Total						21	
YEAR 3 SEMESTER 1	•	1			•		•
MA0101 Engineers and Society	GC	2	1	-	3	3	Harden and MA2004
MA3001 Machine Element Design	С	2	-	3	5	3	Having read MA2001 MA2002
MA3002 Solid Mechanics and Vibration	С	2	1	-	3	3	MA2001
MA3004 Mathematical Methods in Engineering	С	2	1	-	3	3	(MH1810 & MH1811 MH2812/CY1203
MA3005 Control Theory	С	2	1	-	3	3	Having read MA2006
MA3071 Engineering Experiments (ME)	С	-	-	3	3	1	
HW0288 Engineering Communication II	GC	-	2	-	2	2	HW0188 Engineeri Communication I
US3001 Integrated Urban Management	UE	2	1	-	3	3	
ET0001 Entrepreneurship and Innovation	GC	-	1	-	1	1	Online, Sem 1 only
Total						22	
YEAR 3 SEMESTER 2							
MA3080 Professional Internship	С	-	-	-	-	10	
Total						10	

Please refer <u>here</u> for specialised elective courses.

YEAR 4 SEMESTER 1							
MA4079 Final Year Project	С	-	-	4	4	4	Year 4 standing, 2 semesters
MA3010 Thermodynamics & Heat Transfer	С	2	1	-	3	3	MA2003
MA48XX Major-PE 1	PE	3	-	-	3	3	
MA48XX Major-PE 2	PE	3	-	-	3	3	
US4001 Leaders in Urban Systems and Policy	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Water and Environmental Management #2	UE	2	1	-	3	3	
Total						19	
YEAR 4 SEMESTER 2							
MA4079 Final Year Project	С	-	-	4	4	4	Year 4 standing, 2 semesters
MA4012 Mechatronics Engineering Design	С	3	-	3	6	4	Having read MA3001
MA48XX Major-PE 3	PE	3	-	-	3	3	
MA48XX Major-PE 4	PE	3	-	-	3	3	
Society & Urban System Specialization Track: Society and Culture #3	UE	2	1	-	3	3	
Total						17	
GRAND TOTAL (Year 1 to 4)						152	

Degree in Bachelor of Engineering (MECHANICAL ENGINEERING) Programme with SECOND MAJOR IN SOCIETY & URBAN SYSTEMS (FULL-Time) (Optional PA)

For students admitted to FULL-TIME B.ENG in AY2018/2019 (Robotics and Mechatronics Stream)

Course Code and Title	Туре	No	of Hour	s Per V	Veek	AU	Pre-requisite/ Remarks
Source Gode and Hure	.,,,,	Lec	Tut	Lab	Total	,.0	The requisite, memanis
YEAR 1 SEMESTER 1							
MH1810 Mathematics I	С	2	1	-	3	3	
MA1008 Introduction to Computational	С	TBA	TBA	TBA	TBA	3	
Thinking							
PH1011 Physics	С	2	1	-	3	3	PH1011: 'A' level Physics
OR PH1012 Physics A		3	1	-	4	4	
FE1073 Introduction to Engineering and	С			_	1	1	
Practices	C		_		1	1	
HE9091 Principles of Economics	UE	2	1	-	3	3	
Society & Urban System Specialization Track:	UE	2	1	_	3	3	
Society and Culture #1	OL		1		3	,	
HW0188 Engineering Communication I	GC	-	2	-	2	2	HW0001 (co-requisite)
GC0001 Introduction to Sustainability:							
Multidisciplinary Approaches and Solutions	GC	-	1	-	1	1	Online, Sem 1 only
Total						19	
YEAR 1 SEMESTER 2							
MH1811 Mathematics II	С	3	-	-	3	3	
MA1001 Dynamics	С	2	1	-	3	3	Having read PH1011/PH1012/CY1305 and MH1810/MH2812/ CY1201
MA1002 Fundamental Engineering Materials	С	2	1	-	3	3	
MA2003 Introduction to Thermo-fluids	С	2	1	-	3	3	
Society & Urban System Specialization Track:							
Society and Culture #2	UE	2	1	-	3	3	
Society & Urban System Specialization Track:							
Urban Economics and Public Policy #1	UE	2	1	-	3	3	
Total						18	
YEAR 2 SEMESTER 1							
MA2001 Mechanics of Materials	С	2	1	-	3	3	
MA2002 Theory of Mechanism	С	2	1	-	3	3	MA1001
MA2004 Manufacturing Process	С	2	1	_	3	3	
MA2011 Mechatronics Systems Interfacing	С	2	1		3	3	
US2001 Urban Planning & Design	UE	2	1	_	3	3	
	UE		1		3	3	
Society & Urban System Specialization Track: Water and Environmental Management #1	UE	2	1		3	3	
HY0001 Ethics and Moral Reasoning	GC		1		1	1	Online, Sem 1 Only
ML0003 Career Course	GC	TBA	TBA	TBA	TBA	1	Online, Selli 1 Olliy
	GC	IBA	IBA	IBA	IBA		Offinite
Total						20	

YEAR 2 SEMESTER 2							
MA2005 Engineering Graphics	С	2	-	3	5	3	Semester 1 for AE students
MA2006 Engineering Mathematics	С	2	1	-	3	3	(MH1810 & MH1811) MH2812/CY1203
MA2009 Introduction to Electrical Circuits and Electronics	С	2	1	-	3	3	, , , , , , , , , , , , , , , , , , , ,
MA2012 Introduction to Mechatronics Systems Design	С	1	1	3	5	3	
MA2071 Laboratory Experiments (ME)	С	-	-	3	3	1	
MA2079 Engineering Innovation and Design	С	2	-	-	2	2	Semester 2 with 1 week in Special Term
Society & Urban System Specialization Track: Urban Economics and Public Policy #2	UE	2	1	ı	3	3	
Society & Urban System Specialization Track: Urban Economics and Public Policy #3	UE	2	1	-	3	3	
Data Science and Artificial Intelligence	GC	TBA	TBA	TBA	TBA	3	
Total						24	
YEAR 2 SPECIAL SEMESTER							
MA3075 Professional Attachment	С	-	-	-	-	5	
Total						5	
YEAR 3 SEMESTER 1							
MA3001 Machine Element Design	С	2	-	3	5	3	Having read MA2001 8 MA2002
MA3002 Solid Mechanics and Vibration	С	2	1	-	3	3	MA2001
MA3004 Mathematical Methods in Engineering	С	2	1	-	3	3	(MH1810 & MH1811) MH2812/CY1203
MA3010 Thermodynamics & Heat Transfer	С	2	1	-	3	3	MA2003
US3001 Integrated Urban Management	UE	2	1	-	3	3	
ET0001 Entrepreneurship and Innovation	GC	-	1	-	1	1	Online, Sem 1 only
Unrestricted Elective (UE) 1	UE	3	-	-	3	3	
Total						19	
WEAR & CENTER C							
YEAR 3 SEMESTER 2					_		
MA0101 Engineers and Society	GC	2	1	-	3	3	
MA3005 Control Theory	С	2	1	-	3	3	Having read MA2006
MA3006 Fluid Mechanics	С	2	1	-	3	3	MA2003
MA3071 Engineering Experiments (ME)	С	-	-	3	3	1	
MA48XX Major-PE 1	PE	3	-	-	3	3	LINA 04 00 5 1 1 1
HW0288 Engineering Communication II	GC	-	2	-	2	2	HW0188 Engineering Communication I
Unrestricted Elective (UE) 2	UE	2	-	-	2	2	
Total						17	

YEAR 4 SEMESTER 1							
MA4079 Final Year Project	С	-	-	4	4	4	Year 4 standing, 2 semesters
MA48XX Major-PE 2	PE	3	-	-	3	3	
MA48XX Major-PE 3	PE	3	-	-	3	3	
US4001 Leaders in Urban Systems and Policy	UE	2	1	-	3	3	
Society & Urban System Specialization Track: Water and Environmental Management #2	UE	2	1	-	3	3	
Total						16	
YEAR 4 SEMESTER 2							
MA4079 Final Year Project	С	-	1	4	4	4	Year 4 standing, 2 semesters
MA4012 Mechatronics Engineering Design	С	3	1	3	6	4	Having read MA3001
MA48XX Major-PE 4	PE	3	-	-	3	3	
Society & Urban System Specialization Track: Society and Culture #3	UE	2	1	-	3	3	
Total						14	
GRAND TOTAL (Year 1 to 4)						152	