

## AEROSPACE ENGINEERING

B.TECH.					Template No. AE-1			
SEMESTER								
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>
C O U R S E S	MTH101A [11]	MTH102A [11]	ESC201A [14]/ HSS-2 (Level-1) [11]	HSS-2 (Level-1) [11]/ ESC201A [14]	AE311A [09]	AE341A [11]	AE441A [05]	AE462A [04]
	PHY102A [11]/ PHY103A [11]	PHY103A [11]/ PHY102A [11]	ESO/SO-1 ESO204A [11]	ESO/SO -3 ESO201A [11]	AE321A [09]	AE351A [05]	AE451A [05]	AE421A [03]
	PHY101A [03]/ CHM101A [03]	CHM101A [03]/ PHY101A [03]	ESO/SO-2 MSO202a[06] AND MSO203b [06]	ESO/SO-4 ESO202A [11]	AE331A [09]	AE361A [03]	AE461A [07]	HSS-5 (Level-2) [09] OE-4 [09]
	TA101A [09] + LIF101A [06]/ ESC101A [14]	ESC101A [14]/ TA101A [09] + LIF101A [06]	AE201A [05]	TA202A [06]/ TA201A [06]	HSS-3 (Level-2) [09]	AE322A [09]	AE401A [02]	OE-5 [09] DE-3 [09]
	ENG112A/HSS-1 (Level-1) [11]	CHM102A [08]	TA201A [06]/ TA202A [06]	AE211A [11]	OE-1 [09]	HSS-4 (Level-2) [09]	DE-1/ OE-3 [09]	OE-6 / UGP-3 [09] (AE472A)
	PE101A [03]	PE102A [03]	AE231A [06]/ ESO209A [08]*	AE251A [08]	UGP-1 (04) (AE371A) (Extra Credits)	OE-2 [09]	DE-2 [09]	UGP-4 (Extra Credits) (May be taken in the summer after 8 <sup>th</sup> semester)
	-	-	COM200A [05]	-	-	OE-3/ DE-1 [09]	UGP-2 [09] (AE471A)	-
	54	50	56 – 61	58/61	45/49	55	46	52

**MINIMUM CREDIT REQUIREMENT FOR GRADUATION:**

Institute Core (IC)	: 124	Credits
Department Compulsory (DC)	: 111	Credits
UGP-2	: 09	Credit
**Department Elective (DE)	: 27	Credits
Open Elective (OE)	: 54	Credits
ESO/ SO	: 45	Credits
HSS (Level-I)	: 22	Credits
HSS (Level-II)	: 27	Credits
<b>Total</b>	<b>: 419</b>	<b>Credits</b>

**Basket-A**

AE641A [09]  
AE662A [09]  
AE673A [09]  
AE777A [09]  
AE747A [09]

**REMARKS:**

- 1) \*AE231A may be replaced by ESO209A. In either case, these credits will be counted as part of the department compulsory credits.
- 2) \*\*At least 9 credits of DE must be taken from Basket-A.
- 3) OE credits may include 9 credits of UGP-3.
- 4) UGP-1 and UGP-4 are optional and do not count towards graduation requirements. UGP-4 may be taken as extra credits by a student in the summer after the 8<sup>th</sup> semester.
- 5) 09 credits of UGP-2 and upto 27 credits of OE may be waived from the minimum requirements for students opting for dual degree in AE itself.
- 6) Upto 36 OE credits may be waived for students opting either for Dual Degree in another department or the Double Major programme.

BT-MT (PG Part – Category – A) (from the same department)				Template No. AE-2
C O U R S E S	7 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>	10 <sup>th</sup>
	DE PG-1 [09]	DE PG-4 [09]	M.Tech. Thesis [36]	M.Tech. Thesis [36]
	DE PG-2 [09]	DE PG-5 [09]	-	-
	DE PG-3 [09]	DE PG-6 [09]		
	27	27	36	36

**MINIMUM CREDIT REQUIREMENT IN MS PART FOR GRADUATION:**

PG Component : 54 Credits  
 Thesis Component : 72 Credits

**REMARKS:**

- 1) DE PG-1 may be taken instead of UGP-2 in the BT programme.
- 2) Upto 27 OE credits may be used from the BT minimum requirements to fulfil requirements for the BT-MT dual degree programme. These will be waived from the BT programme and counted towards PG requirements.
- 3) Course credits and Thesis credits mentioned under the dual degree template are only for the M.Tech. part of the programme. In addition to these credits, students are required to follow and complete all their graduation requirements for their UG programme EXCEPT for credit waivers detailed above.
- 4) All courses to be taken with the permission of Supervisor/ DUGC Convener.

18 credits of PG DE courses can be substituted from this basket to fulfill the BT-MT (category-A) PG component requirements

ME685A

ME671A

ME723A

ME728A

EE650A

EE653A

EE654A

EE705A / EE651A

"/" indicates that a student should take only one of the two courses.

AE674A / CHE614A

AE617A / CHE614A

AE621A / ME647A

AE614A / ME631A

AE604A / ME630A

AE622A / ME630A

AE605A / ME634A

AE615A / ME634A

AE696A / ME649A

ME674A

ME641A

ME642A

AE653A / ME617A

AE663A / ME643A

AE754A / ME745A

BS/BT-MT (Category – B) (from other departments)			Template No. AE-3			
C O U R S E S	UG Pre-Requisites	PG Component				
		7 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>	10 <sup>th</sup>	
	<del>ESO201A [11]</del>					
	<del>ESO202A [11]</del>	AE601A [09]	DE PG-3 [09]	M.Tech. Thesis [36]	M.Tech. Thesis [36]	
	<del>ESO204A [11]</del>	DE PG-1 [09]	DE PG-4 [09]	DE PG-6 [09]	-	
<del>ESO209A [08]</del>	DE PG-2 [09]	DE PG-5 [09]	-	-		
	41	27	27	45	36	

**MINIMUM CREDIT REQUIREMENT IN MS PART FOR GRADUATION:**

PG Component : 63 Credits  
 Thesis Component : 72 Credits

**REMARKS:**

- 1) AE offers M.Tech. in four streams: Aerodynamics, Propulsion, Structure, and Flight Mechanics. All DE PG course choices will depend upon the chosen stream.
- 2) All courses to be taken with the permission of Supervisor/ DUGC Convener.
- 3) Course credits and Thesis credits mentioned under the dual degree template are only for the M.Tech part of the programme. In addition to these credits, students are required to follow and complete all their graduation requirements for their UG programme.
- 4) Upto 36 OE credits may be used from the parent department's BT/BS minimum requirements to fulfil requirements for the BT/BS-MT dual degree programme. These will be waived from the parent department's BT programme requirements and counted towards PG requirements.

UG pre-requisites have been removed for BT-MT students (category B).

DOUBLE MAJOR		Template No. AE-4
C O U R S E S	Odd Semester	Even Semester
		Pre-Requisites
	ESO204A [11] / ME231A [09] / CHE211A [09]*	
	ESO201A [11] / CHE221 [09]*	
	ESO202A [11]	
	33	
	AE Mandatory Courses	
	AE231A [06]**	AE211A [11]
	AE311A [09]	AE251A [08]
	AE321A [09]	AE341A [11]
	AE331A [09]	AE351A [05]
	AE441A [05]	AE322A [09]
	AE451A [05]	AE462A [04]
	AE461A [07]	
	50**	48

**TOTAL MANDATORY CREDITS FOR SECOND MAJOR IN AEROSPACE ENGINEERING:** 98 CREDITS *(\*\*may vary depending on credits of course found equivalent for AE231A)*

**REMARKS:**

- 1) \*Other equivalent courses for these pre-requisites may be decided in consultation with the AE DUGC.
- 2) \*\*AE231A may be substituted by ME353 / CE455 / ESO209 or other equivalent course in consultation with the AE DUGC. If an equivalent course is found, its credits will replace the credits for AE231A.
- 3) Upto 36 OE credits may be waived from the parent department BT/BS graduation requirements when they are used to fulfill requirements for the double major.

MINOR		Template No.AE-5
Title	AEROSPACE ENGINEERING	
C O U R S E S	AE201A [05]	
	Any THREE from:	
	AE211A [11]	
	AE321A [09]	
	AE331A [09]	
	AE650A [09]/AE753A [09]/AE341 [11]	
	32-36	