

B.Sc. (Aeronautics) Program
FACULTY OF ENGINEERING AND TECHNOLOGY
JAMIA MILLIA ISLAMIA, NEW DELHI - 110025



B.Sc. (Aeronautics)-Mechanical
Course Curriculum

FIRST SEMESTER										
S.NO	COURSE CODE	COURSE NAME	TYPE	CREDIT	Periods Per week			Examination Scheme (Distribution of Marks)		
					L	T	P	SESS. MARKS	UNIV.EXAM MARKS	TOTAL MARKS
THEORY										
1	A108	Aerodynamics	CC	3	3	0	0	30	45	75
2	A107	Aircraft maintenance practices	CC	3	3	0	0	30	45	75
3	A110	Aviation Legislation	DSE	3	3	0	0	30	45	75
4	A109	Human Factor	DSE	3	3	0	0	30	45	75
5	A101	Physics	GE	3	3	0	0	30	45	75
PRACTICAL										
6	AP108	Aerodynamics	CP	1	0	0	2	5	20	25
7	AP107	Aircraft maintenance practices	CP	2	0	0	4	10	40	50
8	AP110	Aviation Legislation	DSEP	1	0	0	2	5	20	25
9	AP101	Physics	GEP	1	0	0	2	5	20	25
Total				20				175	325	500

SECOND SEMESTER										
S.NO	COURSE CODE	COURSE NAME	TYPE	CREDIT	Periods Per week			Examination Scheme (Distribution of Marks)		
					L	T	P	SESS. MARKS	UNIV.EXAM MARKS	TOTAL MARKS
THEORY										
1	A206	Aircraft materials and hardware	CC	3	3	0	0	30	45	75
2	A202	Corrosion & NDT Techniques	GE	3	3	0	0	30	45	75
3	A207	Aircraft maintenance Practices	CC	3	3	0	0	30	45	75
4	A201	English	AECC	3	3	0	0	30	45	75
5	A203	Physics	GE	3	3	0	0	30	45	75
6	A210	Aviation legislation	DSE	3	3	0	0	30	45	75
PRACTICAL										
7	AP206	Aircraft materials and hardware	CP	1	0	0	2	5	20	25
8	AP202	Corrosion & NDT Techniques	GEP	1	0	0	2	5	20	25
9	AP207	Aircraft maintenance Practices	CP	2	0	0	4	10	40	50
10	AP203	Physics	GEP	1	0	0	2	5	20	25
Total				23				205	370	575

THIRD SEMESTER										
S.NO	COURSE CODE	COURSE NAME	TYPE	CREDIT	Periods Per week			Examination Scheme (Distribution of Marks)		
					L	T	P	SESS. MARKS	UNIV. EXAM MARKS	TOTAL MARKS
THEORY										
1	A301	Mathematics	CC	3	3	0	0	30	45	75
2	A303	Electrical fundamentals	CC	3	3	0	0	30	45	75
3	A304	Electronic fundamentals	CC	3	3	0	0	30	45	75
4	A305	Digital techniques and electronics instrument system	CC	3	3	0	0	30	45	75
5	A312	Helicopter aerodynamics structure and system (AIRFRAME SYSTEM-I)	DSE	4	4	0	0	40	60	100
PRACTICAL										
6	AP304	Electronic fundamentals	CCP	1	0	0	2	5	20	25
7	AP303	Electrical fundamentals	CCP	1	0	0	2	5	20	25
8	AP305	Digital techniques and electronics instrument system	CCP	1	0	0	2	5	20	25
9	AP312	Helicopter aerodynamics structure and system (AIRFRAME SYSTEM-I)	DSEP	2	0	0	4	10	40	50
Total				21				185	340	525

FOURTH SEMESTER										
S.NO	COURSE CODE	COURSE NAME	TYPE	CREDIT	Periods Per week			Examination Scheme (Distribution of Marks)		
					L	T	P	SESS. MARKS	UNIV. EXAM MARKS	TOTAL MARKS
THEORY										
1	A401	Mathematics	GE	3	3	0	0	30	45	75
2	A403	Electrical fundamentals	CC	3	3	0	0	30	45	75
3	A405	Digital techniques and electronics instrument system	CC	3	3	0	0	30	45	75
4	A412	Helicopter aerodynamics structure and system (AIRFRAME SYSTEM-II)	CC	4	4	0	0	40	60	100
5	A415	Jet Engine	DSE	4	4	0	0	40	60	100
PRACTICAL										
6	AP403	Electrical fundamentals	CP	1	0	0	4	5	20	25
7	AP405	Digital techniques and electronics instrument system	CP	1	0	0	4	5	20	25
8	AP412	Helicopter aerodynamics structure and system (AIRFRAME SYSTEM-II)	CP	2	0	0	4	10	40	50
9	AP415	Jet Engine	DSEP	2	0	0	4	10	40	50
Total				23				200	375	575

FIFTH SEMESTER

S.NO	COURSE CODE	COURSE NAME	TYPE	CREDIT	Periods Per week			Examination Scheme (Distribution of Marks)		
					L	T	P	SESS. MARKS	UNIV. EXAM MARKS	TOTAL MARKS
THEORY										
1	A511	Aircraft aerodynamics structure and system (AVIONICS SYSTEM-I)	CC	4	4	0	0	40	60	100
2	A512	Aircraft aerodynamics structure and system (AVIONICS SYSTEM-II)	CC	4	4	0	0	40	60	100
3	A513	Helicopter aerodynamics structure and system (AIRFRAME SYSTEM-III)	CC	4	4	0	0	40	60	100
4	A515	Jet engine	GE	4	4	0	0	40	60	100
PRACTICAL										
5	AP511	Aircraft aerodynamics structure and system (AVIONICS SYSTEM-I)	CP	2	0	0	4	10	40	50
6	AP512	Aircraft aerodynamics structure and system (AVIONICS SYSTEM-II)	CP	2	0	0	4	10	40	50
7	AP513	Helicopter aerodynamics structure and system (AIRFRAME SYSTEM-III)	CP	2	0	0	4	10	40	50
8	AP515	Jet engine	CP	2	0	0	4	10	40	50
Total				24				200	400	600

SIXTH SEMESTER										
S.NO	COURSE CODE	COURSE NAME	TYPE	CREDIT	Periods Per week			Examination Scheme (Distribution of Marks)		
					L	T	P	SESS. MARKS	UNIV. EXAM MARKS	TOTAL MARKS
THEORY										
1	A602	Ground handling, safety and support system	GE	3	3	0	0	30	45	75
2	A603	Environmental Science	AECC	3	3	0	0	30	45	75
3	A606	Typical Aircraft Maintenance – Multi engine helicopter	AEEC	4	4	0	0	40	60	100
4	A607	Aircraft pneumatic component maintenance	AEEC	4	4	0	0	40	60	100
PRACTICAL										
5	AP602	Ground handling, safety and support system	CP	1	0	0	2	5	20	25
6	AP606	Typical Aircraft Maintenance – Multi engine helicopter	AEECP	2	0	0	4	10	40	50
7	AP607	Aircraft pneumatic component maintenance	AEECP	2	0	0	4	10	40	50
Total				19				165	310	475

SEVENTH SEMESTER										
S.NO	COURSE CODE	COURSE NAME	TYPE	CREDIT	Periods Per week			Examination Scheme (Distribution of Marks)		
					L	T	P	SESS. MARKS	UNIV. EXAM MARKS	TOTAL MARKS
THEORY										
1	A705	Aircraft hydraulic component maintenance	AEEC	4	4	0	0	40	60	100
2	A706	Aircraft wheel and brake component maintenance	AEEC	4	4	0	0	40	60	100
3	A703	Artificial intelligence	SEC	4						100
4	A708 Project	Project-Airframe system 1	DSE	4						100
PRACTICAL										
5	AP705	Aircraft hydraulic component maintenance	AEECP	2	0	0	4	10	40	50
6	AP706	Aircraft wheel and brake component maintenance	AEECP	2	0	0	4	10	40	50
Total				20				100	200	500

EIGHTH SEMESTER										
S.NO	COURSE CODE	COURSE NAME	TYPE	CREDIT	Periods Per week			Examination Scheme (Distribution of Marks)		
					L	T	P	SESS. MARKS	UNIV. EXAM MARKS	TOTAL MARKS
THEORY										
1	A805	Gas turbine engine maintenance	AEEC	4	4	0	0	40	60	100
2	A806	Aircraft landing gear component maintenance	AEEC	4	4	0	0	40	60	100
3	A803	Drones	SEC	4						100
4	A808 Project	Project- Engine system 2	DSE	4						100
PRACTICAL										
5	AP805	Gas turbine engine maintenance	AEECP	2	0	0	4	10	40	50
6	AP806	Aircraft landing gear component maintenance	AEECP	2	0	0	4	10	40	50
Total				20				100	200	500

GRAND TOTAL				170					2520	4250
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CC	Core Course	CCP	Core Course Practical
DSE	Discipline Specific Elective	DSEP	Discipline Specific Elective Practical
GE	Generic Elective	GEP	Generic Elective Practical
AECC	Ability Enhance compulsory Course		
AEEC	Ability Enhance Elective Course	AEECP	Ability Enhance Elective Course Practical

NOTE :

1. Students who opt to exit after completion of the first year will need to complete one month internship of 4 credits during the summer vacation of first year to get awarded a **UG Certificate (Exit 1)**.
2. Students who opt to exit after completion of the second year will need to complete one month internship of 4 credits during the summer vacation of first or second year to get awarded a **UG Diploma (Exit 2)**.