

# Beihang University

Education Curriculum

## School of Aeronautical Science and Engineering (SASE)

### (A) Education Curriculum for Aircraft Design and Engineering

#### 1<sup>st</sup> ACADEMIC SEMESTER

Code	COURSE TITLE	CREDITS	HOURS	NOTE
25j50010	Chinese (1)	3.5	64	Required
05j80501	Introduction to Aeronautics and Astronautics (A)	2	34	Required
06j80611	Basic Knowledge of Computer	2	44	Required
07j80110	Descriptive Geometry (A1)	2.5	50	Required
32j80100	Engineering Materials	2	31	Required
09j70582	Mathematical Analysis(1)	7	136	Required

#### 2<sup>nd</sup> ACADEMIC SEMESTER

Code	COURSE TITLE	CREDITS	HOURS	NOTE
25j50020	Chinese (2)	3.5	64	Required
03j80630	C Programming Language	2.5	46	Required
07j80120	Mechanical Drawing (A2)	3	70	Required
09j70590	Mathematical Analysis (2)	7	136	Required
09j70620	Advanced Algebra	6	114	Required
09j70632	Fundamental Physics(1)	5.5	104	Required

#### 3<sup>rd</sup> ACADEMIC SEMESTER

Code	COURSE TITLE	CREDITS	HOURS	NOTE
25j50030	Chinese (3)	3.5	64	Required
05j80740	Mechanics of Materials (A2)	2.5	40	Required
09j80710	Theoretical Mechanics (A1)	4	64	Required
32j80110	Manufacturing Technology	2.5	44	Required
09j70190	Physics Experiment (B1)	1.5	28	Required
09j70640	Fundamental Physics (2)	5.5	100	Required

#### 4<sup>th</sup> ACADEMIC SEMESTER

Code	COURSE TITLE	CREDITS	HOURS	NOTE
25j50040	Chinese (4)	3.5	64	Required
03j80290	Electrotechnics and Electronics	4.5	76	Required
05j80750	Mechanics of Materials (A2)	3.5	58	Required
05j85130	Aerodynamics (1)	3	54	Required
07j80130	Theory of Machines and Mechanisms (A3)	2.5	56	Required
09j80720	Theoretical Mechanics (A2)	1.5	26	Required
05z85920	Equations of Mathematical Physics	2	34	Elective
05j85122	Probability and Statistics	2.5	44	Required
09j70200	Physics Experiment (B2)	1.5	24	Required

**5<sup>th</sup> ACADEMIC SEMESTER**

Code	COURSE TITLE	CREDITS	HOURS	NOTE
05j80470	Fundamentals of Automatic Control (B)	3	52	Required
05j85140	Aerodynamics (2)	2.5	42	Required
07j80140	Mechanical Design (A4)	3	69	Required
05z85902	Heat Transfer	2.5	44	Elective
05z85140	Elastic Mechanics	3	54	Required
05z85670	Technology of Computer Aided Design	2	28	Elective
05z8572	Aircraft Techniques	1.5	28	Elective
05j85150	Computing Method	2	34	Required

**6<sup>th</sup> ACADEMIC SEMESTER**

Code	COURSE TITLE	CREDITS	HOURS	NOTE
07s80610	Course Project of Mechanical Design (A)	4	160	Required
05z85090	Aircraft General Design	2	40	Required
05z85080	Analysis and Design of Aircraft Structure	3	52	Required
05z85110	Flight Dynamics	2.5	48	Required
05z85130	Helicopter General Design	2	32	Required
05z85370	Viscous Fluid Mechanics	2	34	Elective
05z85210	Computational Fluid Dynamics	2	34	Elective

**7<sup>th</sup> ACADEMIC SEMESTER**

Code	COURSE TITLE	CREDITS	HOURS	NOTE
05s85020	Specialized Course Project	3	120	Required
05z85160	Helicopter Flight Dynamics	2	36	Elective
05z85200	Experimental Fluid Mechanics	2.5	45	Elective
05z85490	Fundamentals of Hypersonic Aerodynamics	2	34	Elective
05z85640	Aero-Elastic Design	1.5	27	Elective
05z85680	Aircraft Components Design	1.5	28	Elective

**8<sup>th</sup> ACADEMIC SEMESTER**

Code	COURSE TITLE	CREDITS	HOURS	NOTE
05s00800	Graduation Thesis	18	720	Required