

**I.K. Gujral**  
**Punjab Technical University**

**Study Scheme of**  
**B.Tech.**  
**Aerospace Engineering**

**Batch 2018**

**Board of Studies**  
**Aeronautical/Aerospace Engineering**



**Third Semester**

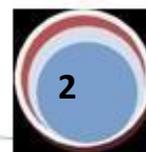
Contact Hours: 33

Course Code	Course Title	Load allocation			Marks distribution		Total Marks	Credits
		L	T	P	Int.	Ext.		
<b>BTASE301-18</b>	Mathematics-III	4	1	0	40	60	100	5
<b>BTASE302-18</b>	Fluid Mechanics	3	1	0	40	60	100	4
<b>BTASE303-18</b>	Aircraft Propulsion-I	3	1	0	40	60	100	4
<b>BTASE304-18</b>	Strength of Materials – I	4	1	0	40	60	100	5
<b>BTASE305-18</b>	Introduction to Aerospace Engineering	3	0	0	40	60	100	3
<b>BTASE306-18</b>	Strength of Materials-I Lab	0	0	2	30	20	50	1
<b>BTASE307-18</b>	Fluid Mechanics Lab	0	0	2	30	20	50	1
<b>BTASE308-18</b>	Aircraft Propulsion-I Lab	0	0	4	30	20	50	2
<b>BTIT309-18</b>	<b>Institutional Training (after 2<sup>nd</sup>Sem)</b>	0	0	4	60	40	100	2
	<b>TOTAL</b>	<b>17</b>	<b>4</b>	<b>12</b>	<b>350</b>	<b>400</b>	<b>750</b>	<b>27</b>

**Fourth Semester**

Contact Hours: 27

Course Code	Course Title	Load Allocation			Marks distribution		Total Marks	Credits
		L	T	P	Int	Ext		
<b>BTASE401-18</b>	Aerodynamics-I	3	1	0	40	60	100	4
<b>BTASE402-18</b>	Aerospace Structures	4	1	0	40	60	100	5
<b>BTASE403-18</b>	Aircraft Propulsion-II	3	1	0	40	60	100	4
<b>BTASE404-18</b>	Aircraft Systems and Flight instruments	4	0	0	40	60	100	4
<b>BTASE405-18</b>	Aircraft Performance	3	1	0	40	60	100	4
<b>BTASE406-18</b>	Aerodynamics-I Lab	0	0	2	30	20	50	1
<b>BTASE407-18</b>	Aerospace Structures lab	0	0	2	30	20	50	1
<b>BTASE408-18</b>	Aircraft Propulsion –II Lab	0	0	2	30	20	50	1
	General Fitness				100		100	S/US
	<b>TOTAL</b>	<b>17</b>	<b>4</b>	<b>6</b>	<b>390</b>	<b>360</b>	<b>750</b>	<b>24</b>



**Fifth Semester**

Contact Hours: 27

Course Code	Course Title	Load allocation			Marks distribution		Total Marks	Credits
		L	T	P	Internal	External		
<b>BTASE501-18</b>	Aircraft stability and Control	3	1	0	40	60	100	4
<b>BTASE502-18</b>	Aerospace Materials & Manufacturing Techniques	4	0	0	40	60	100	4
<b>BTASE503-18</b>	Aerodynamics-II	3	1	0	40	60	100	4
<b>BTASE504-18</b>	Environmental studies	3	0	0	40	60	100	3
<b>BTASEXXX-18</b>	Inter-Disciplinary Elective-I	4	0	0	40	60	100	4
<b>BTASEXXX-18</b>	Elective -I	3	1	0	40	60	100	4
<b>BTASE510-18</b>	Aircraft Systems Lab	0	0	2	30	20	50	1
<b>BTASE511-18</b>	Aerodynamics-II Lab	0	0	2	30	20	50	1
<b>BTIT512-18</b>	<b>Industrial Training</b> <i>(after 4<sup>th</sup>Sem)</i>				60	40	100	2
	<b>TOTAL</b>	<b>20</b>	<b>3</b>	<b>4</b>	<b>360</b>	<b>440</b>	<b>800</b>	<b>27</b>

**Sixth Semester**

Contact Hours: 24

Course Code	Course Title	Load allocation			Marks distribution		Total Marks	Credits
		L	T	P	Internal	External		
<b>BTASE601-18</b>	Computational Fluid Dynamics	3	1	0	40	60	100	4
<b>BTASE602-18</b>	Aeroelasticity	3	0	0	40	60	100	3
<b>BTASEXXX-18</b>	Inter-Disciplinary (Elective –II)	4	0	0	40	60	100	4
<b>BTASE603-18</b>	Innovative product or process development	1	0	4	40	60	100	3
<b>BTASEXXX-18</b>	Elective-II	3	1	0	40	60	100	4
<b>BTASE609-18</b>	Computational Fluid Dynamics Lab	0	0	2	30	20	50	1
<b>BTASE610-18</b>	Vibrations Lab	0	0	2	30	20	50	1
	General Fitness				100		100	S/US



	<b>TOTAL</b>	<b>14</b>	<b>2</b>	<b>8</b>	<b>360</b>	<b>340</b>	<b>700</b>	<b>20</b>
--	--------------	-----------	----------	----------	------------	------------	------------	-----------

### Seventh Semester

Contact Hours: 26

Course Code	Course Title	Load allocation			Marks distribution		Total Marks	Credits
		L	T	P	Internal	External		
<b>BTASE701-18</b>	Helicopter Engineering	3	1	0	40	60	100	4
<b>BTASE702-18</b>	Airplane Design	4	0	0	40	60	100	4
<b>BTASE703-18</b>	Space Dynamics	3	1	0	40	60	100	4
<b>BTASEXXX-18</b>	Elective-III	4	0	0	40	60	100	4
<b>BTASE709-18</b>	Aeromodeling & Simulation Lab	0	0	2	30	20	50	1
<b>BTASE710-18</b>	Project	0	0	6	30	20	50	6
<b>BTASE711-18</b>	Seminar	0	0	2	30	20	50	1
	General Fitness				100		100	S/US
	<b>TOTAL</b>	<b>14</b>	<b>2</b>	<b>10</b>	<b>350</b>	<b>400</b>	<b>650</b>	<b>24</b>

### Eighth Semester

Course Code	Course Title	Marks distribution		Total Marks	Credits
		Internal	External		
<b>BTANE801-18</b>	Software Training	150	100	250	4
<b>BTANE802-18</b>	Industrial/Institutional Training for skill Enhancing	300	200	500	8
<b>Total</b>		450	300	750	12



### **Elective-I**

<b>Course code</b>	<b>Course name</b>
BTASE505-18	Aircraft Maintenance and Airworthiness
BTASE506-18	Aircraft transportation and operations
BTASE507-18	Aerospace Quality Assurance
BTASE508-18	Wind Turbines
BTASE509-18	Theory of Machines

### **Elective-II**

<b>Course code</b>	<b>Course name</b>
BTASE604-18	Composite Materials
BTASE605-18	Rocket Propulsion
BTASE606-18	Applied Gas Dynamics
BTASE607-18	Experimental Techniques in Aerodynamics
BTASE608-18	Automatic Flight Control

### **Elective-III**

<b>Course code</b>	<b>Course name</b>
BTASE704-18	Rockets and Missiles
BTASE705-18	Avionics
BTASE706-18	Viscous Flow Theory
BTASE707-18	Guidance and Navigation of Aerospace Vehicles
BTASE708-18	Satellites and Launch Vehicles

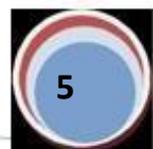
### **Inter-Disciplinary Elective-I**

- Subjects offered by other departments

### **Inter-Disciplinary Elective-II**

- Subjects offered by other departments

**Inter-Disciplinary-I (Subjects offered by Aerospace Engg. Deptt for other departments)**



BTASE513-18	Introduction to Aerospace Engineering
BTASE514-18	Aircraft Structures

**Inter-Disciplinary-II (Subjects offered by Aerospace Engg. Deptt for other departments)**

BTASE611-18	Elements of Aerodynamics
BTASE612-18	Aircraft Performance
BTASE613-18	Aircraft Propulsion