

**DAYANANDA SAGAR UNIVERSITY**  
SHAVIGE MALLESHWARA HILLS, KUMARASWAMY  
LAYOUT BENGALURU-560 111, KARNATAKA.

**SCHOOL OF ENGINEERING**



**SCHEME &  
SYLLABUS FOR  
BACHELOR OF TECHNOLOGY  
(B.Tech) IN**

**AEROSPACE ENGINEERING  
2018-2022**

**16AS XXXX**

**SCHEME OF B.TECH IN AEROSPACE**

**ENGINEERING III SEM**

SL	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					SCHEME OF EVALUATION	
				L	T	P	S/P	C	CIA	END EXAM
1	16MA201	ENGINEERING MATHEMATICS – III	CR	04	--	--	--	04	40	60
2	16AS202	INTRODUCTION TO AEROSPACE ENGINEERING	CR	03	--	--	--	03	40	60
3	16AS203	THERMODYNAMICS	CR	03	01	--	--	04	40	60
4	16AS204	FLUID MECHANICS	CR	03	01	--	--	04	40	60
5	16AS205	SOLID MECHANICS	CR	03	01	--	--	04	40	60
6	16AS206	AEROSPACE MATERIALS	CR	03	--	--	--	03	40	60
7	16AS271	COMPOSITES LAB	CR	--	--	03	--	1.5	40	60
8	16AS272	FLUID MECHANICS LAB	CR	--	--	03	--	1.5	40	60
9	16AS281	MINI PROJECT – I	CR	--	--	--	04	02	40	60
<b>GRAND TOTAL = 900</b>				<b>19</b>	<b>03</b>	<b>06</b>	<b>04</b>	<b>27</b>	<b>360</b>	<b>540</b>

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**SCHEME OF B.TECH IN AEROSPACE**

**ENGINEERING IV SEM**

SL	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					SCHEME OF EVALUATION	
				L	T	P	S/P	C	CIA	END EXAM
1	16MA202	ENGINEERING MATHEMATICS – IV	CR	04	--	--	--	04	40	60
2	16AS207	AERODYNAMICS – I	CR	03	01	--	--	04	40	60
3	16AS208	AEROSPACE STRUCTURAL MECHANICS	CR	03	01	--	--	04	40	60
4	16AS209	MECHANISMS AND MACHINE THEORY	CR	03	01	--	--	04	40	60
5	16AS210	AIRCRAFT PROPULSION	CR	03	--	--	--	03	40	60
6	16AS211	PRODUCT DESIGN - 1	CR	02	--	02	--	03	40	60
7	16AS273	AEROSPACE STRUCTURES LAB	CR	--	--	03	--	1.5	40	60
8	16AS274	MATERIAL TESTING LAB	CR	--	--	03	--	1.5	40	60
9	16AS282	MINI PROJECT – II	CR	--	--	--	04	02	40	60
<b>GRAND TOTAL = 900</b>				<b>18</b>	<b>03</b>	<b>08</b>	<b>04</b>	<b>27</b>	<b>360</b>	<b>540</b>

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**SCHEME OF B.TECH IN AEROSPACE**

**ENGINEERING V SEM**

SL	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					SCHEME OF EVALUATION	
				L	T	P	S/P	C	CIA	END EXAM
1	16AS301	AERODYNAMICS-II	CR	03	01	--	--	04	40	60
2	16AS302	INTRODUCTION TO SPACE TECHNOLOGY	CR	04	--	--	--	04	40	60
3	16AS303	AIRCRAFT PERFORMANCE	CR	03	01	--	--	04	40	60
4	16AS304	PRINCIPLES OF MANAGEMENT AND ECONOMICS FOR ENGINEERS	CR	03	--	--	--	03	40	60
5	16AS3XX	PROGRAM ELECTIVE – 1	CR	03	--	--	--	03	40	60
6	16IE3XX	OPEN ELECTIVE – 1	CR	03	--	--	--	03	40	60
7	16AS371	AEROSPACE PROPULSION LAB	CR	--	--	03	--	1.5	40	60

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**PROGRAM ELECTIVE – I**

SL	COURSE CODE	COURSE TITLE
1	16AS311	WIND TUNNEL MODEL TESTING
2	16AS312	AIR TRANSPORTATION SYSEM
3	16AS3132	FINITE ELEMENTAL METHODS

**SCHEME OF B.TECH IN AEROSPACE**

**ENGINEERING VI SEM**

SL	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					SCHEME OF EVALUATION	
				L	T	P	S/P	C	CIA	END EXAM
1	16AS305	CONTROL THEORY	CR	03	01	--	--	04	40	60
2	16AS306	AIRCRAFT SYSTEMS AND INSTRUMENTATION	CR	03	--	--	--	03	40	60
3	16AS307	AIRCRAFT STABILITY AND CONTROL	CR	03	--	--	--	03	40	60
4	16AS308	ORBITAL MECHANICS	CR	03	--	--	--	03	40	60
5	16AS3XX	PROGRAM ELECTIVE – 2	CR	03	--	--	--	03	40	60
6	16IE3XX	OPEN ELECTIVE – 2	CR	03	--	--	--	03	40	60
7	16AS373	SIMULATION LAB	CR	--	--	03	--	1.5	40	60

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**PROGRAM ELECTIVE – 2**

SL	COURSE CODE	COURSE TITLE
1	16AS314	INTRODUCTION TO COMPUTATIONAL FLUID DYNAMICS
2	16AS315	MANUFACTURING TECHNOLOGY

## VII SEMESTER

SL	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING						SCHEME OF EVALUATION	
				L	T	P	S/P	C	No. of hour/Week	CIA	END EXAM
1	16AS401	Avionics	CR	3			2	4	4	40	60
2	16AS404/1 6AS406	Program Elective 3	CR	3				3	3	40	60
3	16AS408/1 6AS410	Program Elective 4	CR	3				3	3	40	60
4	16IEXXX	Open Elective -3	CR	3				3	3	40	60
5	16AS402	Law for Engineers	CR	3				3	3	40	60
7	16AS471	AI&ML Lab	CR			4		2	4	40	60
8	16AS472	Major Project Stage-1	CR				10	5	10	40	60
<b>TOTAL</b>				<b>15</b>		<b>4</b>	<b>11</b>	<b>23</b>	<b>30</b>	<b>280</b>	<b>420</b>

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### PROGRAM ELECTIVE – 3

SL	COURSE CODE	COURSE TITLE
1	16AS403	Helicopter Dynamics
2	16AS406	Aircraft Design
3	16AS404	Unmanned Aircraft Systems & E-Mobility

**PROGRAM ELECTIVE – 4**

<b>SL</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>
1	16AS407	Optimization Techniques
2	16AS408	Satellite Technologies
3	16AS409	Introduction to Artificial Intelligence and Machine Learning
4	16AS410	Aircraft Maintenance, Overhaul and Repair

### VIII SEMESTER

SL	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING						SCHEME OF EVALUATION	
				L	T	P	S/P	C	No. of hour/Week	CIA	END EXAM
1	16AS411	Program Elective – 5	CR	03	--	--	--	03	03	40	60
2	16AS4XX	Open Elective – 4	CR	03	--	--	--	03	03	40	60
3	16AS481	Major Project Stage – II	CR	--	--	--	18	09	18	100	100
4			<b>TOTAL</b>	<b>06</b>	<b>--</b>	<b>--</b>	<b>06</b>	<b>15</b>	<b>24</b>	<b>180</b>	<b>220</b>

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SL	COURSE CODE	COURSE TITLE
1	16AS412	Aerospace Technical Publications
2	16AS413	Rockets and Missiles
3	16AS414	NPTEL Course on Rocket Propulsion

SL	COURSE CODE	COURSE TITLE
1	16IE470	Aircraft Systems and Instrumentation

NPTEL Course on Rocket Propulsion can be completed from any open online courses (SWAYAM/NPTEL/COURSERA/MOOC etc.). A list of 5-7 courses will be suggested by the department. Students need to select one from this list .

