



V4

**Curriculum**

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TIU.FA.FR.

**Unit: Aviation Engineering Department**

Rev/ Issue Date

2-19/1/2019

**First Year**

Fall Term/First Semester					
Code	Course Name	Theory	Practice	Credit	ECTS
PHYS 101	General Physics	2	2	3	5
MATH 101	Calculus I	4	0	4	5
DBT 101	Academic Debate and Critical Thinking	2	0	2	3
ME 104	Computer Programming and Algorithm	2	2	3	4
ME 117	Engineering Drawing	1	3	3	4
ELT 103	Advanced English	3	0	3	4
KUR 105	Kurdology I	2	0	2	2
	Non – Technical Elective 1 - (Languages - Turkish)	2	0	2	3
<b>Total</b>		<b>18</b>	<b>7</b>	<b>22</b>	<b>30</b>

Spring Term/Second Semester					
Code	Course Name	Theory	Practice	Credit	ECTS
AVE 121	General Chemistry	3	0	3	4
MATH 102	Calculus II	4	0	4	5
AVE 123	Air Law	3	0	3	4
AVE 122	Engineering Mechanics (Statics)	3	0	3	4
AVE 124	Computer Drawing	0	4	2	4
ELT 104	Technical English	3	0	3	4
KUR 106	Kurdology II	2	0	2	2
	Non – Technical elective 2 - (Interpersonal Dynamics)	2	0	2	3
<b>Total</b>		<b>20</b>	<b>4</b>	<b>22</b>	<b>30</b>

**Second Year**

Fall Term/Third Semester					
Code	Course Name	Theory	Practice	Credit	ECTS
AVE 201	Strength of Materials	3	2	4	5
AVE 202	Engineering Mechanics (Dynamics)	3	0	3	4
AVE 203	Introduction to Aviation Engineering	2	0	2	4
AVE 204	Fundamentals of Electric and Electronics	3	2	4	5
AVE 205	Engineering Thermodynamics	3	2	4	5
AVE 206	Engineering Mathematics I	3	0	3	4
	Non – Technical Elective 3 - (Marketing)	2	0	2	3
<b>Total</b>		<b>19</b>	<b>6</b>	<b>22</b>	<b>30</b>

Spring Term/Fourth Semester					
Code	Course Name	Theory	Practice	Credit	ECTS
AVE 211	Fundamentals of Aerodynamics	3	2	4	5
AVE 212	Mechanical Vibration	3	0	3	4
AVE 213	Fluid Mechanics	3	0	3	5
AVE 214	Measurements and Instrumentation	2	2	3	4
AVE 215	Aircraft Structural Materials	3	2	4	5
AVE 216	Engineering Mathematics II	3	0	3	4
	Non – Technical Elective 4 - (Entrepreneurship and Innovation)	2	0	2	3
<b>Total</b>		<b>19</b>	<b>6</b>	<b>22</b>	<b>30</b>

### Third Year

Fall Term/Fifth Semester					
Code	Course Name	Theory	Practice	Credit	ECTS
AVE 301	Aircraft Performance	3	0	3	5
AVE 302	Numerical Methods	3	2	4	5
AVE 303	Automatic Control	3	0	3	5
AVE 304	Gas Dynamics	3	0	3	5
AVE 305	Digital Logic Systems	3	2	4	5
	Technical Elective 1 - (Hydraulics and Pneumatics)	3	0	3	5
<b>Total</b>		<b>18</b>	<b>4</b>	<b><u>20</u></b>	<b><u>30</u></b>

Spring Term/Sixth Semester					
Code	Course Name	Theory	Practice	Credit	ECTS
AVE 311	Aircraft Structure	3	2	4	5
AVE 312	Machine Element Design	3	0	3	4
AVE 313	Propulsion Systems	3	2	4	5
AVE 314	Aircraft Stability and Control	3	0	3	4
AVE 315	Heat Transfer	3	0	3	4
AVE 318	Summer Training (8 Weeks)	0	6	3	3
	Technical Elective 2 - (Composite Material)	3	0	3	5
<b>Total</b>		<b>18</b>	<b>10</b>	<b><u>23</u></b>	<b><u>30</u></b>

### Fourth Year

Fall Term/Seventh Semester					
Code	Course Name	Theory	Practice	Credit	ECTS
AVE 401	Aircraft Design	3	0	3	5
AVE 402	Avionic Systems	3	2	4	5
AVE 403	Aircraft Maintenance Systems	3	0	3	5
AVE 404	Research Methodology	1	2	2	5
	Technical Elective 3 - (Unmanned Aerial Vehicles UAV)	3	0	3	5
	Technical Elective 4 - (FND Aviation Management)	3	0	3	5
<b>Total</b>		<b>16</b>	<b>4</b>	<b><u>18</u></b>	<b><u>30</u></b>

Spring Term/Eighth Semester					
Code	Course Name	Theory	Practice	Credit	ECTS
AVE 411	Aviation Maintenance Management	3	0	3	5
AVE 412	Aviation Safety	3	0	3	5
AVE 413	Aircraft Navigation Systems	3	2	4	5
AVE 414	Graduation Project	1	4	3	5
	Technical Elective 5 - (Rotary Wing Aircraft)	3	0	3	5
	Technical Elective 6 - (Aeroelasticity)	3	0	3	5
<b>Total</b>		<b>16</b>	<b>6</b>	<b><u>19</u></b>	<b><u>30</u></b>

## Electives

Technical Electives					
Code	Course Name	Theory	Practice	Credit	ECTS
AVE 306	Introduction to Airspace	3	0	3	5
AVE 316	Aerodynamics II	3	0	3	5
AVE 308	Air Accident Investigation	3	0	3	5
AVE 309	Unmanned Aerial Vehicle	3	0	3	5
AVE 319	Aircraft Structures II	3	0	3	5
AVE 405	Computational Fluid Dynamics	3	0	3	5
AVE 307	Economics and Engineering Management	3	0	3	5
AVE 322	Mechanics of Machinery	3	0	3	5
AVE 317	Aeroelasticity	3	0	3	5
AVE 406	Human Factors in Aviation	3	0	3	5
AVE 415	Pneumatic and Hydraulic Systems	3	0	3	5
AVE 416	Composite Materials	3	0	3	5
AVE 417	Nondestructive Testing for Aircraft	3	0	3	5
AVE 418	Rotary Wing Aircrafts	3	0	3	5
AVE 407	Fundamental of Aviation Management	3	0	3	5
AVE 408	Modern Technologies of Aircraft Manufacturing	3	0	3	5
AVE 409	Introduction to Project Management	3	0	3	5
AVE 419	Special Topics in Aviation	3	0	3	5

Nontechnical Electives					
Code	Course Name	Theory	Practice	Credit	ECTS
GEN 201	Ecology	2	0	2	3
BUS 221	Marketing	2	0	2	3
CE 225	Computer Programing	2	0	2	3
AVE 207	Entrepreneurship and Innovation	2	0	2	3
AVE 217	Aviation Legislation	2	0	2	3
PTR 125	Engineering Statistics	2	0	2	3
TUR 121	Turkish I	2	0	2	3
TUR 122	Turkish II	2	0	2	3
AVE 208	Academic and Technical Communication	2	0	2	3
BUS 234	Intercultural Communication	2	0	2	3