CURRICULUM SHEET

Master of Science in Engineering
Aerospace Engineering Emphasis
Curriculum Year: 2019-2020

Major Courses – Required Major Core		
Course Number	**Course Title**	**Units**
EGR 5110	Numerical Methods	3
	*Select minimum of **3 units** from the following:*	
EGR 6910	Directed Study	(1-2)
EGR 6950	Master's Degree Project	2
EGR 6960	Master's Degree Thesis	(3-6)
Total Number of MAJOR CORE units:		**6**

Required Emphasis Courses for *Aerospace Engineering*		
Course Number	**Course Title**	**Units**
ARO 5060	Aerospace Structures	3
ARO 5090	Astronautics	3
ARO 5100	Airbreathing Propulsion Systems	3
ARO 5450	Optimal Control & Estimation	3
ARO 5770	Aerodynamics of Wings and Bodies	3
Total of Emphasis Core Units		**15**

Elective Emphasis Courses for *Aerospace Engineering*		
Course Number	**Course Title**	**Units**
	*Select minimum of **9 units** from the following elective Courses:*	
ARO 5080	Finite Element Analysis of Structures	3
ARO 5140	Rocket Propulsion	3
ARO 5150	Missile Engineering	3
ARO 5180	Computational Fluid Dynamics	3
ARO 5210	Helicopter Aerodynamics and Performance	3
ARO 5220	Robust Control of Nonlinear Systems	3
ARO 5230	Structural Dynamics	3
ARO 5280	Hypersonic Aerodynamics	3
ARO 5330	Digital Flight Control Systems	3
ARO 5430	Aircraft System Identification	3
ARO 5460	Orbit Determination and Estimation	3
ARO 5780	Aircraft Stability	3
ARO 5810	Spacecraft Design	3
ARO 5910	Aircraft Design	3
ARO 5950	Boundary Layer Concepts	3
EGR 5090	Advanced Differential Equations	3
EGR 5120	Vector Analysis and Complex Variables	3
EGR 5130	Engineering Tensor Analysis	3
EGR 5150	Matrix Methods in Engineering	3
EGR 5360	Composite Materials	3
EGR 5990	Special Topics for Graduate Students	3
EGR 6960	Master's Degree Thesis	(3-6)
Total of Emphasis Core Units		**9**

MSE-AE ROADMAP

Your department has developed this road plan, taking into account prerequisites and schedule restrictions. You should pay attention to these concerns when deviating from this plan.

	Fall	Units	Spring	Units	Summer	Units
Y1	**ARO 5060** Emphasis Core	3	**ARO 5090** Emphasis Core	3	**ARO 5100** Emphasis Core	3
	EGR 5110 Major Core	3	**Elective** Emphasis Elective	3		
	Total Units	**6**	**Total Units**	**6**	**Total Units**	**3**
					Total Units for Year	**15**

	Fall	Units	Spring	Units	Summer	Units
Y2	**ARO 5450** Emphasis Core	3	**ARO 5770** Emphasis Core	3	**Elective** Emphasis Elective	3
	Elective Emphasis Elective	3	**EGR 6950** Major Core	(1)		
	EGR 6910 Major Core	(2)				
	Total Units	**8**	**Total Units**	**4**	**Total Units**	**3**
					Total Units for Year	**15**

Total Units on Plan	**30**	**Comment**
MSE Core Units	**6**	*Students take MS project EGR 6920 and 6910 or the MS thesis EGR 6960 for a minimum of 3 units*
Emphasis Core Units	**15**	
Emphasis Elective Units	**9**	