## Department of Mechanical and Aerospace Engineering Graduate Five Year Plan Offerings 2016-2020

SUB	CRS	TITLE	16F	17S	17M	17F	18S	18M	18F	19S	19M	19F	20S	20M	20F
MAE	540	Rocket Propulsion I	Х			Х		Х	Х			Х		Х	Х
MAE	541	Airbreathing Propulsion	Х		Х	Х			Х		Х	Х			Х
MAE	542	Internal Combustion Engines						Offere	d on de	emand					
MAE	544	Introduction to Electric Propulsion					Х					<u></u>	Х		
MAE	545	Heat Distribution System Design	Offered on demand												
MAE	546	Solar Energy Systems						Offere	d on de	emand					
MAE	548	Energy Conversion and Power Generation						Offere	d on de	emand					
MAE	561	Vibrations of Elastic Systems				Х						Х			
MAE	563	Intermediate Dynamics	X						Х						Х
MAE	568	Elements of Spacecraft Design	X	Х		Х	Х		Х	Х		Х	Х		Х
MAE	574	Applied Mechanics of Solids		Х			Х			Х		i	Х		
MAE	576	Mechanics and Fabrication of Composite Materials						Offere	d on de	emand					
MAE	577	Experimental Techniques in Solid Mechanics						Offere	d on de	emand					
MAE	580	Aircraft Stability and Control	X	Х		Х	Х		Х	Х		Х	Х		Х
MAE	585	Numerical Methods and Computation III				Х						Х			
MAE	589	Computer-Aided Engineering	Х	Х		Х	Х		Х						
MAE	595	Selected Topics in Mechanical and Aerospace Engineering	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
MAE	595	ST:Intro to Nuclear Propulsion					Х						Х		
MAE	610	Aerodynamics (Currently Listed as MAE 695)	Х			Х			Х			Х			Х
MAE	620	Compressible Flow (Currently Listed as MAE 695)		Х			Х			Х			х		
MAE	623	Computational Fluid Dynamics I	X			Х			Х			Х			Х
MAE	640	Rocket Propulsion II		Х						Х					
MAE	641	Advanced Thermodynamics	X			х			Х			Х			Х
MAE	643	Advanced Heat and Mass Transfer	X						х						Х
MAE	644	Advanced Solid Rocket Propulsion	1				Х						х		
MAE	645	Combustion I				х						Х			
MAE	649	Transport Phenomena						Offere	d on de	emand					
MAE	651	Viscous Fluid Mechanics	X			Х			Х			Х			Х
MAE	660	Structural Dynamics	<u> </u>				Х						х		
MAE	671	Continuum Mechanics	X	х		х	X		Х	Х		Х	X		Х
MAE	672	Elasticity	X						X						X
MAE	673	Plasticity	+ ^-	х						Х					
MAE	674	Finite Element Analysis I				х						Х			
MAE	676	Viscoelasticity					Х						х		
MAE	678	Mechanics of Composite Materials		l				Offere	d on de	emand					
MAE	683	Graduate Seminar	X	Х		Х	Х		Х	Х		Х	Х		Х
MAE	684	Aerospace Systems Seminar	X	Х		Х	Х		Х	Х		Х	Х		Х
MAE	685	Graduate Seminar	X	X		Х	Х		Х	X		Х	Х		Х
MAE	692	Graduate Engineering Analysis I	X			Х			Х			Х			Х
MAE	693	Graduate Engineering Analysis II	1	х			Х			Х			х		
MAE	695	Selected Topics in Mechanical and Aerospace Engineering	X	X	х	х	Х	Х	x	Х	х	х	X	х	Х
MAE	699	Master's Thesis	X	X	X	Х	Х	X	Х	X	X	Х		Х	Х
MAE	723	Computational Fluid Dynamics II		X						X			1 X 1		
MAE	724	Computational Fluid Dynamics III					1 X						X		
MAE					x		Х	X		^	×		X		
MAE	740	· · · · · · · · · · · · · · · · · · ·		×	Х		X	Х			Х			Х	
	740 741	Aerothermodynamics		Х	Х			Х		X	Х				
	741	Aerothermodynamics Statistical Thermodynamics		Х	Х		Х	X			X		X		
MAE	741 745	Aerothermodynamics Statistical Thermodynamics Combustion II		Х	Х				d on de	Х	Х				
MAE MAE	741 745 746	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer		X	X		Х	Offere	ed on de	X	X		X		
MAE MAE	741 745 746 748	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer		X	Х		Х	Offere	d on de	X	X		X		
MAE MAE MAE	741 745 746 748 749	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport		X	Х		Х	Offere Offere	d on de	X emand emand emand	X		X		
MAE MAE MAE MAE	741 745 746 748 749 751	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory		X	X		Х	Offere Offere Offere	d on de d on de d on de	X emand emand emand	X		X		
MAE MAE MAE MAE MAE	741 745 746 748 749 751 752	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases	У	X	X		Х	Offere Offere Offere	ed on de ed on de ed on de	X emand emand emand	X		X		X
MAE MAE MAE MAE MAE MAE	741 745 746 748 749 751 752 754	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow	X	X	X		X	Offere Offere Offere	d on de d on de d on de	X emand emand emand	X		X		X
MAE MAE MAE MAE MAE MAE MAE MAE	741 745 746 748 749 751 752 754 755	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics	X		X		Х	Offere Offere Offere	ed on de ed on de ed on de	X emand emand emand emand emand	X		X		X
MAE	741 745 746 748 749 751 752 754 755 758	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics Turbulence	X	X	X		X	Offere Offere Offere Offere	ed on de ed on de ed on de ed on de X	x emand emand emand emand emand	X		X		X
MAE	741 745 746 748 749 751 752 754 755 758 760	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics Turbulence Analytical Methods in Nonlinear Dynamics	x		X		X	Offere Offere Offere Offere	ed on de ed on de ed on de ed on de X	X emand emand emand emand emand	X		X		X
MAE	741 745 746 748 749 751 752 754 755 758 760 762	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics Turbulence Analytical Methods in Nonlinear Dynamics Wave Motion of Continuous Elastic Bodies	X		X		X	Offere Offere Offere Offere Offere	ed on de ed on de ed on de X	x emand emand emand emand emand x emand	X		X		X
MAE	741 745 746 748 749 751 752 754 755 758 760 762	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics Turbulence Analytical Methods in Nonlinear Dynamics Wave Motion of Continuous Elastic Bodies Random Vibration of Elastic Systems			X		X	Offere Offere Offere Offere Offere	ed on de don de don de don de X	x emand emand emand emand emand x emand	X		X		
MAE	741 745 746 748 749 751 752 754 755 758 760 762 765 772	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics Turbulence Analytical Methods in Nonlinear Dynamics Wave Motion of Continuous Elastic Bodies Random Vibration of Elastic Systems Theory of Structural Stability	X		X		X	Offere Offere Offere Offere Offere Offere	ed on de	x emand emand emand emand emand emand emand emand emand emand	X		X		X
MAE	741 745 746 748 749 751 752 754 755 760 762 765 772	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics Turbulence Analytical Methods in Nonlinear Dynamics Wave Motion of Continuous Elastic Bodies Random Vibration of Elastic Systems Theory of Structural Stability Theory of Shells			X		X	Offere Offere Offere Offere Offere Offere Offere	ed on deed on	X  mand  mand  mand  mand  mand  x  x  mand  mand  mand  mand  mand  mand  mand  mand  mand	X		X		
MAE	741 745 746 748 749 751 752 754 755 760 762 765 772 773	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics Turbulence Analytical Methods in Nonlinear Dynamics Wave Motion of Continuous Elastic Bodies Random Vibration of Elastic Systems Theory of Structural Stability Theory of Shells Finite Element Analysis II			X		X	Offere Of	ed on de	X  Emand  Emand	X		X		
MAE	741 745 746 748 749 751 752 754 755 768 760 762 773 774 776	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics Turbulence Analytical Methods in Nonlinear Dynamics Wave Motion of Continuous Elastic Bodies Random Vibration of Elastic Systems Theory of Structural Stability Theory of Shells Finite Element Analysis II Theory of Finite Elasticity and Finite Viscoelasticity			X		X	Offere Of	ed on deed on	X  Emand  Emand	X		X		
MAE	741 745 746 748 749 751 752 754 755 758 760 762 765 772 773 774 776	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics Turbulence Analytical Methods in Nonlinear Dynamics Wave Motion of Continuous Elastic Bodies Random Vibration of Elastic Systems Theory of Structural Stability Theory of Shells Finite Element Analysis II Theory of Finite Elasticity and Finite Viscoelasticity Fracture Mechanics	X		X	X	X	Offere Of	d on ded	X  Emand  Emand	X	X	X		X
MAE	741 745 746 748 749 751 752 754 755 758 760 762 765 772 773 774 776 778	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics Turbulence Analytical Methods in Nonlinear Dynamics Wave Motion of Continuous Elastic Bodies Random Vibration of Elastic Systems Theory of Structural Stability Theory of Shells Finite Element Analysis II Theory of Finite Elasticity and Finite Viscoelasticity Fracture Mechanics Theory of Acoustics	X	X			X	Offere Of	d on de d on d on	X  mand mand mand mand mand mand mand man			x	X	X
MAE	741 745 746 748 749 751 752 754 755 758 760 762 765 772 773 774 776 778 780 795	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics Turbulence Analytical Methods in Nonlinear Dynamics Wave Motion of Continuous Elastic Bodies Random Vibration of Elastic Systems Theory of Structural Stability Theory of Shells Finite Element Analysis II Theory of Finite Elasticity and Finite Viscoelasticity Fracture Mechanics Theory of Acoustics Selected Topics in Mechanical and Aerospace Engineering	X		X	х	X	Offere Of	d on ded	X  Emand  Emand	X	х	X		X
MAE	741 745 746 748 749 751 752 754 755 758 760 762 765 772 773 774 776 778	Aerothermodynamics Statistical Thermodynamics Combustion II Convective Heat Transfer Radiative Transfer Mass Transport Boundary Layer Theory Mechanics of Rarefied Gases Hypersonic Flow Advanced Aerodynamics Turbulence Analytical Methods in Nonlinear Dynamics Wave Motion of Continuous Elastic Bodies Random Vibration of Elastic Systems Theory of Structural Stability Theory of Shells Finite Element Analysis II Theory of Finite Elasticity and Finite Viscoelasticity Fracture Mechanics Theory of Acoustics	X	X			X	Offere Of	d on de d on d on	X  mand mand mand mand mand mand mand man			x	X	X