SCHOOL OF ENGINEERING			
Degree: MASTER OF SCIENCE IN MECHANICAL ENGINEERING **Credits: 30**		**CURRICULUM**	
Program: AEROSPACE ENGINEERING			
Description: This specialization will provide the necessary tools in design, computational analysis, and fundamentals of aerospace engineering to advance the interests of this sector. Elective courses are divided into two areas: 1. Structures/Mechanics, and 2. Aerodynamics/Propulsion. You may select courses from both branches. This specialization requires a Bachelor's degree in mechanical engineering or aerospace engineering. Plan 1 (M.S. degree-Thesis). Plan 1 is an excellent option for full-time students with a strong interest in research.			
Course Code	**Course Title**	**Credits**	**Requisites**
Required Courses			
MEEN 501	Finite Element Analysis	3	ENGI 318/ MATH-350
MEEN 502	Aircraft Design	3	ENGI 305/ ENGI 318
MEEN 601	Advanced Mathematics for Engineers	3	MATH 395
MEEN 604	Aerodynamics 1: Incompressible Flow	3	ENGI 305
		12	
Specialization Courses (select 4 courses			
MEEN 612	Aerospace Structural Analysis	3	MEEN 501
MEEN 613	Flight Mechanics	3	ENGI 305/ ENGI 334
MEEN 614	Propulsion Systems	3	MEEN 604
MEEN 615	Aerodynamics II: Compressible Flow	3	MEEN 604
MEEN 622	Boundary Layers	3	ENGI 305/ MEEN 601
MEEN 624	Combustion	3	MEEN 421
MEEN 628	Advanced Topics in Aerospace	3	Permission of the department head
MEEN 629	Independent Study in Aerospace	3	Permission of the department head.
*MEEN 611	Composite Materials	3	MEEN 501
*MEEN 616	Introduction to Aeroelasticity	3	MEEN 464
*MEEN 623	Multi-Scale Turbulence: Aeronautics	3	MEEN 604
*MEEN 672	Mechanical Vibrations	3	MATH 395/ ENGI 334/ MEEN 501
*MEEN 673	Computational Fluid Dynamics (CFD)	3	ENGI 305/ MEEN 601
*MEEN 676	Design Optimization	3	ENGI 122/ MEEN 601
*MEEN 682	Systems Engineering	3	As required
*MEEN 683	Friction, Wear and Lubrication	3	ENGI 244
*MEEN 684	Advanced Tribology	3	MEEN 683
*	(Also available in other specialization areas)		
		12	
Degree Requirements			
MEEN 697	MS Thesis	6	Permission of Thesis Advisor
		6	

SCHOOL OF ENGINEERING			
Degree: MASTER OF SCIENCE IN MECHANICAL ENGINEERING **Credits: 30**		**PLAN OF STUDY** Plan 1 (M.S. degree-Thesis). Plan 1 is an excellent option for full-time students with a strong interest in research	
Program: AEROSPACE ENGINEERING			
Course Code	**Course Title**	**Credits**	**Requisites**
FIRST YEAR - FIRST SEMESTER			
MEEN 501	Finite Element Analysis	3	ENGI 318/ MATH-350
MEEN 601	Advanced Mathematics for Engineers	3	None
MEEN 604	Aerodynamics 1: Incompressible Flow	3	ENGI 305
		9	
FIRST YEAR - SECOND SEMESTER			
MEEN 502	Aircraft Design	3	ENGI 305/ ENGI 318
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	As required
(Specialization course)	Any Aerospace Engineering Specialization Course	3	As required
		9	
SECOND YEAR – FIRST SEMESTER			
MEEN 697	MS Thesis (Aerospace Engineering topic counts toward 12-cr minimum for the Aerospace Engineering Specialization)	3	Permission of Thesis Advisor
(Specialization course)	Any Aerospace Engineering Specialization Course	3	As required
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	As required
		9	
SECOND YEAR - SECOND SEMESTER			
MEEN 697	MS Thesis (Aerospace Engineering topic counts toward 12-cr minimum for the Aerospace Engineering Specialization)	3	Permission of Thesis Advisor
		3	

SCHOOL OF ENGINEERING

Degree: MASTER OF SCIENCE IN MECHANICAL ENGINEERING **Credits: 30**	**CURRICULUM**

Program: AEROSPACE ENGINEERING

Description: This specialization will provide the necessary tools in design, computational analysis, and fundamentals of aerospace engineering to advance the interests of this sector. Elective courses are divided into two areas: 1. Structures/Mechanics, and 2. Aerodynamics/Propulsion. You may select courses from both branches. This specialization requires a Bachelor's degree in mechanical engineering or aerospace engineering. Plan 2 (M.S. degree-Special Project). Plan 2 is ideal to conduct design and development in an area of particular interest

Course Code	Course Title	Credits	Requisites
Required Courses			
MEEN 501	Finite Element Analysis	3	ENGI 318/ MATH-350
MEEN 502	Aircraft Design	3	ENGI 305/ ENGI 318
MEEN 601	Advanced Mathematics for Engineers	3	MATH 395
MEEN 604	Aerodynamics 1: Incompressible Flow	3	ENGI 305
		12	
Specialization Courses (select 5 courses)			
MEEN 612	Aerospace Structural Analysis	3	MEEN 501
MEEN 613	Flight Mechanics	3	ENGI 305/ ENGI 334
MEEN 614	Propulsion Systems	3	MEEN 604
MEEN 615	Aerodynamics II: Compressible Flow	3	MEEN 604
MEEN 622	Boundary Layers	3	ENGI 305/ MEEN 601
MEEN 624	Combustion	3	MEEN 421
MEEN 628	Advanced Topics in Aerospace	3	Permission of the department head
MEEN 629	Independent Study in Aerospace	3	Permission of the department head.
*MEEN 611	Composite Materials	3	MEEN 501
*MEEN 616	Introduction to Aeroelasticity	3	MEEN 464
*MEEN 623	Multi-Scale Turbulence: Aeronautics	3	MEEN 604
*MEEN 672	Mechanical Vibrations	3	MATH 395/ ENGI 334/ MEEN 501
*MEEN 673	Computational Fluid Dynamics (CFD)	3	ENGI 305/ MEEN 601
*MEEN 676	Design Optimization	3	ENGI 122/ MEEN 601
*MEEN 682	Systems Engineering	3	As required
*MEEN 683	Friction, Wear and Lubrication	3	ENGI 244
*MEEN 684	Advanced Tribology	3	MEEN 683
*	(Also available in other specialization areas)		
		15	
Degree Requirements			
MEEN 694	Special Project	3	Permission of Advisor
		3	

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SCHOOL OF ENGINEERING			
Degree: MASTER OF SCIENCE IN MECHANICAL ENGINEERING **Credits: 30**		**PLAN OF STUDY** Plan 2 (M.S. degree-Special Project). Plan 2 is ideal to conduct design and development in an area of particular interest	
Program: AEROSPACE ENGINEERING			
Course Code	**Course Title**	**Credits**	**Requisites**
FIRST YEAR - FIRST SEMESTER			
MEEN 501	Finite Element Analysis	3	ENGI 318/ MATH-350
MEEN 601	Advanced Mathematics for Engineers	3	MATH 395
MEEN 604	Aerodynamics 1: Incompressible Flow	3	ENGI 305
		9	
FIRST YEAR - SECOND SEMESTER			
MEEN 502	Aircraft Design	3	ENGI 305/ ENGI 318
(Specialization course)	Any Aerospace Engineering Specialization Course	3	As required
(Specialization course)	Any Aerospace Engineering Specialization Course	3	As required
		9	
SECOND YEAR – FIRST SEMESTER			
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	As required
(Specialization course)	Any Aerospace Engineering Specialization Course	3	As required
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	As required
		9	
SECOND YEAR - SECOND SEMESTER			
MEEN 694	Special Project (Aerospace Engineering topic counts toward 12-cr minimum for the Aerospace Engineering Specialization)	3	Permission of Advisor
		3	

SCHOOL OF ENGINEERING	
Degree: MASTER OF MECHANICAL ENGINEERING **Credits: 30**	**CURRICULUM**
Program: AEROSPACE ENGINEERING	
Description: This specialization will provide the necessary tools in design, computational analysis, and fundamentals of aerospace engineering to advance the interests of this sector. Elective courses are divided into two areas: 1. Structures/Mechanics, and 2. Aerodynamics/Propulsion. You may select courses from both branches. This specialization requires a Bachelor's degree in mechanical engineering or aerospace engineering. Plan 3 (M. Eng. degree). Plan 3 caters primarily to working professionals who seek highly specialized knowledge.	

Course Code	Course Title	Credits	Requisites
Required Courses			
MEEN 501	Finite Element Analysis	3	ENGI 318/ MATH-350
MEEN 502	Aircraft Design	3	ENGI 305/ ENGI 318
MEEN 601	Advanced Mathematics for Engineers	3	MATH 395
MEEN 604	Aerodynamics 1: Incompressible Flow	3	ENGI 305
		12	
Specialization Courses (select 6 courses)			
MEEN 612	Aerospace Structural Analysis	3	MEEN 501
MEEN 613	Flight Mechanics	3	ENGI 305/ ENGI 334
MEEN 614	Propulsion Systems	3	MEEN 604
MEEN 615	Aerodynamics II: Compressible Flow	3	MEEN 604
MEEN 622	Boundary Layers	3	ENGI 305/ MEEN 601
MEEN 624	Combustion	3	MEEN 421
MEEN 628	Advanced Topics in Aerospace	3	Permission of the department head
MEEN 629	Independent Study in Aerospace	3	Permission of the department head.
*MEEN 611	Composite Materials	3	MEEN 501
*MEEN 616	Introduction to Aeroelasticity	3	MEEN 464
*MEEN 623	Multi-Scale Turbulence: Aeronautics	3	MEEN 604
*MEEN 672	Mechanical Vibrations	3	MATH 395/ ENGI 334/ MEEN 501
*MEEN 673	Computational Fluid Dynamics (CFD)	3	ENGI 305/ MEEN 601
*MEEN 676	Design Optimization	3	ENGI 122/ MEEN 601
*MEEN 682	Systems Engineering	3	As required
*MEEN 683	Friction, Wear and Lubrication	3	ENGI 244
*MEEN 684	Advanced Tribology	3	MEEN 683
*	(Also available in other specialization areas)		
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SCHOOL OF ENGINEERING			
Degree: MASTER OF MECHANICAL ENGINEERING **Credits: 30**		**PLAN OF STUDY** Plan 3 (M. Eng. degree). Plan 3 caters primarily to working professionals who seek highly specialized knowledge	
Program: AEROSPACE ENGINEERING			
Course Code	**Course Title**	**Credits**	**Requisites**
FIRST YEAR - FIRST SEMESTER			
MEEN 501	Finite Element Analysis	3	ENGI 318/ MATH-350
MEEN 601	Advanced Mathematics for Engineers	3	MATH 395
MEEN 604	Aerodynamics 1: Incompressible Flow	3	ENGI 305
		9	
FIRST YEAR - SECOND SEMESTER			
MEEN 502	Aircraft Design	3	ENGI 305/ ENGI 318
(Specialization course)	Any Aerospace Engineering Specialization Course	3	As required
(Specialization course)	Any Aerospace Engineering Specialization Course	3	As required
		9	
SECOND YEAR – FIRST SEMESTER			
(Specialization course)	Any Aerospace Engineering Specialization Course	3	As required
(Specialization course)	Any Aerospace Engineering Specialization Course	3	As required
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	As required
		9	
SECOND YEAR - SECOND SEMESTER			
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	As required
		3	