

SCHOOL OF ENGINEERING			
Degree: MASTER OF SCIENCE		CURRICULUM	
Credits: 30		Since: August 2016	
Program: MECHANICAL ENGINEERING			
Description: If an area of specialization is not declared, a student will have the opportunity to collaborate with a professor in research in other areas of interest in mechanical engineering. There is currently an ongoing effort in the area of biomechanics which may be of high interest to many students. 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 (12 crs)			
MEEN 501	Finite Element Analysis	3	
MEEN 601	Advanced Mathematics for Engineers	3	
MEEN 602	Advanced Mechanics of Materials	3	
MEEN 604	Aerodynamics 1: Incompressible Flow	3	
Specialization Courses (select 4 courses: 12 cr.)			
MEEN 603	Advanced Fluid Mechanics	3	
MEEN 671	Advanced Heat Conduction	3	
MEEN 674	Micro & Nano Heat Transfer	3	
MEEN 678	Advanced Topics	3	Permission of the department head
MEEN 679	Independent Study	3	Permission of the department head
*MEEN 502	Aircraft Design	3	
*MEEN 611	Composite Materials	3	
*MEEN 616	Introduction to Aeroelasticity	3	
*MEEN 617	Dynamics of Rotating Machinery	3	
*MEEN 623	Multi-Scale Turbulence: Aeronautics	3	MEEN 604
*MEEN 630	Engineering Internship I	1	Permission of the Department Head
*MEEN 631	Engineering Internships II	1	MEEN 630 and Permission
*MEEN 641	Sustainable Energy: : Solar, Nuclear, Wind Energy Fuel Cell & Geothermal	3	
*MEEN 672	Mechanical Vibrations	3	
*MEEN 673	Computational Fluid Dynamics (CFD)	3	
*MEEN 675	MEMS and Energy Harvesting	3	
*MEEN 676	Design Optimization	3	
*MEEN 681	Introduction to Biomechanics	3	
*MEEN 682	Systems Engineering	3	
*MEEN 683	Friction, Wear and Lubrication	3	
*MEEN 684	Advanced Tribology	3	
*MEEN 685	Applied Modern Control	3	
* (Asterisk)	(Course is also available in other specialization areas)		
Degree Requirements (6 crs)			
MEEN 697	MS Thesis	6	Permission of Thesis Advisor

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Program: MECHANICAL ENGINEERING			
Course Code	Course Title	Credits	Requisites
FIRST YEAR - FIRST SEMESTER			
MEEN 501	Finite Element Analysis	3	
MEEN 601	Advanced Mathematics for Engineers	3	
MEEN 604	Aerodynamics 1: Incompressible Flow	3	
FIRST YEAR - SECOND SEMESTER			
MEEN 602	Advanced Mechanics of Materials	3	
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
(Specialization course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
SECOND YEAR – FIRST SEMESTER			
MEEN 697	MS Thesis	3	Permission of Thesis Advisor
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
SECOND YEAR - SECOND SEMESTER			
MEEN 697	MS Thesis	3	Permission of Thesis Advisor

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Program: MECHANICAL ENGINEERING			
Description: If an area of specialization is not declared, a student will have the opportunity to collaborate with a professor in research in other areas of interest in mechanical engineering. There is currently an ongoing effort in the area of biomechanics which may be of high interest to many students. 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 (12 crs)			
MEEN 501	Finite Element Analysis	3	
MEEN 601	Advanced Mathematics for Engineers	3	
MEEN 602	Advanced Mechanics of Materials	3	
MEEN 604	Aerodynamics 1: Incompressible Flow	3	
Specialization Courses (select 5 courses: 15 crs)			
MEEN 603	Advanced Fluid Mechanics	3	
MEEN 671	Advanced Heat Conduction	3	
MEEN 674	Micro & Nano Heat Transfer	3	
MEEN 678	Advanced Topics	3	Permission of the department head
MEEN 679	Independent Study	3	Permission of the department head
*MEEN 502	Aircraft Design	3	
*MEEN 611	Composite Materials	3	
*MEEN 616	Introduction to Aeroelasticity	3	
*MEEN 617	Dynamics of Rotating Machinery	3	
*MEEN 623	Multi-Scale Turbulence: Aeronautics	3	MEEN 604
*MEEN 630	Engineering Internship I	1	Permission of the Department Head
*MEEN 631	Engineering Internships II	1	MEEN 630 and Permission
*MEEN 641	Sustainable Energy: : Solar, Nuclear, Wind Energy Fuel Cell & Geothermal	3	
*MEEN 672	Mechanical Vibrations	3	
*MEEN 673	Computational Fluid Dynamics (CFD)	3	
*MEEN 675	MEMS and Energy Harvesting	3	
*MEEN 676	Design Optimization	3	
*MEEN 681	Introduction to Biomechanics	3	
*MEEN 682	Systems Engineering	3	
*MEEN 683	Friction, Wear and Lubrication	3	
*MEEN 684	Advanced Tribology	3	
*MEEN 685	Applied Modern Control	3	
* (Asterisk)	(Course is also available in other specialization areas)		
Degree Requirements (3 crs)			
MEEN 694	Special Project	3	Permission of Advisor

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SCHOOL OF ENGINEERING			
Degree: MASTER OF SCIENCE Credits: 30		PLAN OF STUDY Since: August 2016 Plan 2 (M.S. Degree-Special Project). Plan 2 is ideal to conduct design and development in an area of particular interest	
Program: MECHANICAL ENGINEERING			
Course Code	Course Title	Credits	Requisites
FIRST YEAR - FIRST SEMESTER			
MEEN 501	Finite Element Analysis	3	
MEEN 601	Advanced Mathematics for Engineers	3	
MEEN 604	Aerodynamics 1: Incompressible Flow	3	
FIRST YEAR - SECOND SEMESTER			
MEEN 602	Advanced Mechanics of Materials	3	
(Specialization course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
(Specialization course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
SECOND YEAR – FIRST SEMESTER			
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
SECOND YEAR - SECOND SEMESTER			
MEEN 694	Special Project	3	Permission of Advisor

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Description: If an area of specialization is not declared, a student will have the opportunity to collaborate with a professor in research in other areas of interest in mechanical engineering. There is currently an ongoing effort in the area of biomechanics which may be of high interest to many students. 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 (12 crs)			
MEEN 501	Finite Element Analysis	3	
MEEN 601	Advanced Mathematics for Engineers	3	
MEEN 602	Advanced Mechanics of Materials	3	
MEEN 604	Aerodynamics 1: Incompressible Flow	3	
Specialization Courses (select 6 courses: 18 crs)			
MEEN 603	Advanced Fluid Mechanics	3	
MEEN 671	Advanced Heat Conduction	3	
MEEN 674	Micro & Nano Heat Transfer	3	
MEEN 678	Advanced Topics	3	Permission of the department head
MEEN 679	Independent Study	3	Permission of the department head
*MEEN 502	Aircraft Design	3	
*MEEN 611	Composite Materials	3	
*MEEN 616	Introduction to Aeroelasticity	3	
*MEEN 617	Dynamics of Rotating Machinery	3	
*MEEN 623	Multi-Scale Turbulence: Aeronautics	3	MEEN 604
*MEEN 630	Engineering Internship I	1	Permission of the Department Head
*MEEN 631	Engineering Internships II	1	MEEN 630 and Permission
*MEEN 641	Sustainable Energy: : Solar, Nuclear, Wind Energy Fuel Cell & Geothermal	3	
*MEEN 672	Mechanical Vibrations	3	
*MEEN 673	Computational Fluid Dynamics (CFD)	3	
*MEEN 675	MEMS and Energy Harvesting	3	
*MEEN 676	Design Optimization	3	
*MEEN 681	Introduction to Biomechanics	3	
*MEEN 682	Systems Engineering	3	
*MEEN 683	Friction, Wear and Lubrication	3	
*MEEN 684	Advanced Tribology	3	
*MEEN 685	Applied Modern Control	3	
* (Asterisk)	(Course is also available in other specialization areas)		

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Degree: MASTER OF ENGINEERING Credits: 30		PLAN OF STUDY Since: August 2016 Plan 3 (M. Eng. degree). Plan 3 caters primarily to working professionals who seek highly specialized knowledge	
Program: MECHANICAL ENGINEERING			
Course Code	Course Title	Credits	Requisites
FIRST YEAR - FIRST SEMESTER			
MEEN 501	Finite Element Analysis	3	
MEEN 601	Advanced Mathematics for Engineers	3	
MEEN 604	Aerodynamics 1: Incompressible Flow	3	
FIRST YEAR - SECOND SEMESTER			
MEEN 602	Advanced Mechanics of Materials	3	
(Specialization course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
(Specialization course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
SECOND YEAR – FIRST SEMESTER			
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	
SECOND YEAR - SECOND SEMESTER			
(MEEN course)	Any Aerospace Engineering Specialization, Alternative Energy Specialization, or General Course	3	