



MECHANICAL ENGINEERING
COURSE EQUIVALENTS
2007 Edition

University of Alberta

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07-MEC-A1	Applied Thermodynamics and Heat Transfer		
MEC E 340	Applied Thermodynamics	ENME 485	Mechanical Engineering Thermodynamics
&			
MEC E 370	Heat Transfer	& ENME 471	Heat Transfer
07-MEC-A2	Kinematics and Dynamics of Machines		
MEC E 362	Mechanics of Machines	ENME 473	Fundamentals of Kinematics & Dynamics of Machines
&			
MEC E 451	Vibrations and Sound		
07-MEC-A3	System Analysis and Control		
CH E 448	Process Control for Mechanical Engineers	ENME 585 Control Systems	
Or			
E E 462	Fundamentals of Control Systems Engineering		
Or			
MEC E 420	Feedback Control Design of Dynamic Systems		
07-MEC-A4	Design and Manufacture of Machine Elements		
MEC E 260	Mechanical Design I	ENME 417	Manufacturing and Production Processes
&			
MEC E 360	Mechanical Design II		
07-MEC-A5	Electrical and Electronics Engineering		
E E 239	Fundamentals of Electrical Engineering	ENME 461 & ENGG 325	Mechatronics Electric Circuits & Systems
07-MEC-A6	Fluid Machinery		
MEC E 330	Fluid Mechanics	ENME 597	Turbomachinery
&			
MEC E 439	Principles of Turbomachines		
07-MEC-A7	Advanced Strength of Materials		

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MEC E 380	Advanced Strength of Materials I	ENME 497	Mechanics of Materials I
&		ENME 587	Mechanics of Materials II
MEC E 480	Advanced Strength of Materials II		
07-MEC-B1	Advanced Machine Design		
MEC E 360	Mechanical Design II	ENME 493	Machine Component Design
&			
ENG M 514	Design for Reliability		
07-MEC-B2	Environmental Control in Buildings		
MEC E 553	Acoustics & Noise Control	ENME 583	Mechanical Systems in Buildings
&			
MEC E 463	Thermo-Fluids System Design		
07-MEC-B3	Energy Conversion and Power Generation		
MEC E 443	Energy Conversion	ENME 593	Energy Systems
&			
MEC E 439	Principles of Turbomachines		
07-MEC-B4	Integrated Manufacturing Systems		
ENG M 501		ENMF 415	Integrated Manufacturing Systems I
		&	
		ENMF 503	Computer Numerically Controlled Machines
		&	
		ENMF 515	Computer Based Control for Manufacturing
07-MEC-B5	Product Design and Development		
No Course Equivalent		ENME 538	Mechanical Engineering Design and Methodology and Application
07-MEC-B6	Advanced Fluid Mechanics		
MEC E 430	Fluid Mechanics II	ENME 495	Fluid Mechanics
07-MEC-B7	Aerodynamics and Space Flight		
MEC E 537	Aerodynamics	No Course Equivalent	
07-MEC-B8	Engineering Materials		

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No Course Equivalent

ENME 521 Materials II

07-Mec-B9 Advanced Engineering Structures

No Course Equivalent

No Course Equivalent

07-MEC-B10 Finite Element AnalysisMEC E 563 Finite Element Method for
Mechanical Engineering

ENME 547 Finite Element Methods

07-MEC-B11 Acoustic and Noise Control

MEC E 553 Acoustics and Noise Control

No Course Equivalent

07-MEC-B12 Robot MechanicsMEC E 551 Mechanics and Control of
Robot Manipulators

ENMF 505 Robotics

07-Mec-B13 BiomechanicsMEC E 585 Biomechanics of Connective
TissuesENME 523 Biomechanics of Joints
&
BMEN 405 Biological Tissue and
System Mechanics**Revised March 2002**