



The Association of Professional
Engineers and Geoscientists of Alberta

**MECHANICAL ENGINEERING
COURSE EQUIVALENTS
2016 EDITION**

<i>University of Alberta</i>		<i>University of Calgary</i>	
16-MEC-A1	Applied Thermodynamics and Heat Transfer		
MEC E 340	Applied Thermodynamics	ENME 471	Heat Transfer
&		&	
MEC E 370	Heat Transfer	ENME 485	Mechanical Engineering Thermodynamics
16-MEC-A2	Kinematics and Dynamics of Machines		
MEC E 362	Mechanics of Machines	ENME 473	Fundamentals of Kinematics and Dynamics Of Machines
&			
MEC E 451	Vibrations and Sound		
16-MEC-A3	System Analysis and Control		
	Process Control for Mechanical Engineers		
CH E 448		ENME 585	Control Systems
OR			
	Fundamentals of Control Systems Engineering		
ECE 362			
OR			
	Feedback Control Design of Dynamic Systems		
MEC E 420			
16-MEC-A4	Design and Manufacture of Machine Elements		
MEC E 260	Mechanical Design I	ENME 493	Machine Component Design
&			
MEC E 360	Mechanical Design II		
16-MEC-A5	Electrical and Electronics Engineering		
	Introduction to Digital Logic Design		<i>No Course Equivalent Offerred</i>
ECE 210			
&			
ECE 332	Electric Machines		
16-MEC-A6	Fluid Machinery		
MEC E 331	Fluid Mechanics I	ENME 597	Turbomachinery
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MEC E 439	Principles of Turbomachines		
16-MEC-A7 Advanced Strength of Materials			
MEC E 380	Advanced Strength of Materials I	ENME 479	Mechanics Of Materials I
&			
MEC E 480	Advanced Strength of Materials II		
16-MEC-B1 Advanced Machine Design			
MEC E 360	Mechanical Design II		<i>No Course Equivalent Offerrec</i>
&			
ENG M 514	Reliability for Design		
16-MEC-B2 Environmental Control in Buildings			
MEC E 466	Building Systems Design	ENME 583	Mechanical Systems In Buildings
OR			
MEC E 463	Thermo-Fluids System Design		
&			
MEC E 553	Acoustics and Noise Control		
OR			
ENG M 508	Energy Auditing and Management		
16-MEC-B3 Energy Conversion and Power Generation			
MEC E 443	Energy Conversion		<i>No Course Equivalent Offerrec</i>
&			
MEC E 439	Principles of Turbomachines		
16-MEC-B4 Integrated Manufacturing Systems			
ENG M 408	Manufacturing Systems and Engineering	ENMF 514	Integrated Manufacturing Systems
&			
ENG M 501	Production and Operations Management		
16-MEC-B5 Product Design and Development			
No Course Equivalent		ENMF 417	Manufacturing & Production Process
16-MEC-B6 Advanced Fluid Mechanics			
MEC E 430	Fluid Mechanics II	ENME 595	Gas Dynamics
16-MEC-B7 Aeri and Space Flight			
MEC E 537	Aerodynamics		<i>No Course Equivalent Offerrec</i>
16-MEC-B8 Engineering Materials			
MAT E 351	Mechanical Properties	ENME 421	Materials I
&			
MAT E 471	Ceramics		
&			
MAT E 491	Functional Properties		

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Advanced Engineering Structures			
16-MEC-B9	Structures		
<i>No Course Equivalent Offered</i>			<i>No Course Equivalent Offered</i>
16-MEC-B10	Finite Element Analysis		
MEC E 563	Finite Element Method for Mechanical Engineering	ENME 547	Finite Element Method
16-MEC-B11	Acoustic and Noise Control		
MEC E 553	Acoustics and Noise Control		<i>No Course Equivalent Offered</i>
16-MEC-B12	Robotics		
MEC E 551	Mechanics and Control of Robot Manipulators	ENME 505	Robotics
16-MEC-B13	Biomechanics		
	Biomechanics of Connective Tissues		Biomechanics of Movement
MEC E 585		BMEN 523	

Updated June 2019