



**Mutah University**  
**College of Graduate Studies**

## Master's Degree in Mechanical Engineering Comprehensive Track

**Comprehensive Track: The total credit hours required for graduation are 33 credit hours, distributed as follows:**

<b>A: - Specialization Requirements Compulsory Credit Hours (24)</b>	Course Code	Course Title	Credit Hours	Prerequisite
	0402735	Advanced Eng. Mathematics and Numerical Analysis	3	-
	0402724	Research Methodology	3	-
	0402711	Stress Analysis	3	-
	0402721	Thermo – Fluid Sciences	3	-
	0402716	Advanced Mechanical Vibrations	3	-
	0402713	Fracture Mechanics	3	-
	0402720	Renewable Energy Systems	3	-
	0402739	Advanced Mechanical Design	3	-

<b>B: - Elective Major Requirements Credit Hours (9)</b>	Course Code	Course Title	Credit Hours	Prerequisite
	0402712	Advanced Tribology	3	-
	0402714	Advanced Automatic Control	3	-
	0402715	Advanced Friction and Wear Theories	3	-
	0402730	Computational fluid Dynamics and Heat Transfer	3	-
	0402743	Composite and Ceramic Materials	3	-
	0402723	Advanced Thermodynamics	3	-
	0402736	Nano Technology	3	-
	0402717	Theory of Elasticity and plasticity	3	-
	0402725	Advanced Fluid Mechanics	3	-
	0402727	Air Conditioning Systems	3	-
	0402731	Gas Dynamics	3	-
	0402737	Selective Research Subjects	3	-
0402738	Advanced Manufacture Process	3	-	

<b>C: - College Compulsory</b>	Course Code	Course Title	Credit Hours	Prerequisite
	.....	Continuous Registration	0	
		Comprehensive Exam	0	