

STUDY PLAN

PROGRAMME NAME : MASTER OF SCIENCE (MECHANICAL ENGINEERING)

PROGRAMME CODE : MEMM

SEPTEMBER INTAKE

COURSE	SEMESTER 1 (Normal)	SEMESTER 2 (Normal)	SEMESTER 3 (Short)	TOTAL CREDIT
University Elective	UXXX xxx3			3
Programme Core	MEMM1903 MEMM1013 MEMM1023			9
Track Elective (Select 5 courses only)	MEMx xxx3	MEMx xxx3 MEMx xxx3 MEMx xxx3 MEMx xxx3		15
Free Elective (Select 1 only)	Any 1 course cross discipline XXXX xxx3			3
Project 1		MKMM1914		4
Project 2			MKMM2926	6
TOTAL CREDIT	18	16	6	40

FEBRUARY INTAKE

COURSE	SEMESTER 1 (Normal)	SEMESTER 2 (Short)	SEMESTER 3 (Normal)	TOTAL CREDIT
University Elective	UXXX xxx3			3
Programme Core	MEMM1903		MEMM1013 MEMM1023	9
Track Elective (Select 5 courses only)	MEMx xxx3 MEMx xxx3 MEMx xxx3		MEMx xxx3 MEMx xxx3	15
Free Elective (Select 1 only)	Any 1 course cross discipline XXXX xxx3			3
Project 1		MKMM1914		4
Project 2			MKMM2926	6
TOTAL CREDIT	18	4	18	40

LIST OF COURSES

TYPE	CODE	COURSES
University General Course <i>(Select one only)</i>	UHMS 6013	Seminar On Global Development, Economic and Social Issues
	UHS 6013	Philosophy Of Science and Civilization
	UECS 6023	Introduction To Technopreneurship
	UBSE 1123	Organization Behaviour and Development
	UBSS 6023	Business Ethics, Responsibility and Sustainability
	UECS 6013	IT Project Management
	UHLM 6013	Bahasa Melayu Penulisan Ilmiah
	UHMZ 6023	Malaysian Society and Culture
	UHPS 6013	Dynamics Of Leadership
	URTS 6013	Environmental Ethics
Programme Core	MEMM1903	Research Methodology
	MEMM1013	Emerging technologies and management
	MEMM1023	Product innovation and development
Master Project	MEMM1914	Master Project I
	MEMM2926	Master Project II

PROGRAMME TRACK ELECTIVES (Choose one track only)

TRACK	CODE	ELECTIVE COURSES
1. General Mechanical		<i>(Select 5 courses from any tracks 1 to 12)</i>
	MEMM1133	Elasticity and Plasticity
	MEMM1143	Plates, Shell and Pressure Vessels
	MEMM1223	Adaptive control and Intelligent System
	MEMM1233	Robotic System and Control
	MEMM2213	Advanced Control System
	MEMM1253	Acoustics
	MEMM1273	Vibration measurement and Control
	MEMM1283	Structural Dynamics
	MEMM1313	Viscous Fluid Flow
	MEMM1323	Compressible Flows
	MEMM1423	Thermo Fluid Measurement and Diagnostic
	MEMM1453	Indoor environmental Quality
	MEMM2413	Advanced Engineering Thermodynamics
	MEMM2423	Advanced Combustion
	MEMM1533	Virtual Reality for Engineers
MEMM1553	Creative Design Engineering	
2. Structural Health and monitoring		<i>(Select 5 courses from this track)</i>
	MEMM1213	Automatic Control & Instrumentation
	MEMM1263	Condition Monitoring
	MEMM1463	Conduction And Convection Heat Transfer
	MEMM1123	Computational Method in Solid Mechanics
	MEMM1343	Friction, Wear & Lubrication
	MEMB1633	Assets Integrity & Management
MEMM1113	Fatigue & Fracture Mechanics	

3. Sustainable Engineering	MEMM1213 MEMM1413 MEMM1433 MEMM2113 MEMM1543 MEMM1723	(Select 5 courses from this track) Automatic Control & Instrumentation Energy Management Sustainable Energy System and Technology Advanced Mechanics of Composite Structure Engineering Design and Reliability Green Manufacturing Technology
4. Computational Mechanics	MEMM1913 MEMM1123 MEMM1333 MEMM1513 MEMM2223 MEMM1523	(Select 5 courses from this track) Advance Engineering Mathematics Computational Method in Solid Mechanics Computational Fluid Dynamics CAD and It's Applications Advanced Industrial Automation Optimization in Engineering Design
5. Manufacturing Engineering	MEMM1733 MEMM2733 MEMM1713 MEMM2703 MEMM1723 MEMM2763 MEMM2773 MEMM2713 MEMM2723 MEMM1753	(Select 5 courses from this track) Digital Manufacturing It For Manufacturing Statistical Quality Engineering Automation Systems and Robotics Green Manufacturing Technology Advanced Manufacturing Processes Machining And Machine Tools Technology Welding Technologies and Applications Smart Manufacturing Manufacturing Science
6. Materials Engineering	MEMB1613 MEMB1623 MEMB1633 MEMB1643 MEMB2613 MEMB2623 MEMB2633 MEMB2643 MEMB2653 MEMB2663	(Select 5 Courses From This Track) Advanced Materials Processing Smart Materials Assets Integrity and Management Structural Composites Advanced Materials Characterization Advanced Surface Modification for Metallic Materials Electron Microscopy for Nanomaterials Mechanical Behavior of Materials Corrosion And Materials Degradation Advanced Ceramic Processing
7. Future generation vehicle	MEMV2213 MEMV1313 MEMV1613 MEMV1203 MEMV1623 MEMV1013	(Select 5 courses from this track) Automotive Noise, Vibration and Harshness Advanced Vehicle Dynamics Future Mobility Solution Automotive Electronics & Control Vehicle Connectivity Advanced Automotive Technology
8. Energy efficient vehicle	MEMV2213 MEMV1403 MEMV1503 MEMV2413 MEMV2513 MEMV1013	(Select 5 courses from this track) Automotive Noise, Vibration and Harshness Internal Combustion Engine & Boosting System Advanced Vehicle Powertrain Low Carbon Fuel Automotive Tribology Advanced Automotive Technology

9. Industrial Aerodynamics	MEMF1313	<i>(Select 5 courses from this track)</i> Advanced Aerodynamics
	MEMF2323	Computational Aerodynamics
	MEMF2343	Industrial Aerodynamic and Wind Engineering
	MEMF2353	Experimental Aerodynamics
	MEMF2213	Advanced Aircraft Dynamics and Control
10. Advanced Aerospace Engineering	MEMF1313	<i>(Select 5 courses from this track)</i> Advanced Aerodynamics
	MEMF2213	Advanced Aircraft Dynamics and Control
	MEMF2013	Computational Method for Aerostructures
	MEMF2113	Advanced Aircraft Structures and Materials
	MEMF2423	Jet Propulsion
	MEMF2433	Rocket Technology
	MEMF2443	Gas Turbine Technology
	MEMF2513	Helicopter System and Performance
	MEMF2613	Aviation Management and Airworthiness
MEMF2223	Aircraft Instrumentation and Avionics	
11. Ship technology	MEMO1213	<i>(Select 3 compulsory courses & any 2 courses from this track)</i> Dynamic of Marine Structures (compulsory)
	MEMO2813	Safety, Risk and Reliability in Marine Operation (compulsory)
	MEMO2113	Strength and Vibration of Marine Structures (compulsory)
	MEMO2003	Marine Environment and Renewable Energy
	MEMO1713	Ship Repair, Survey and Inspection
	MEMO2313	Ship Powering and Propulsion
	MEMO1413	Dynamic of Marine Power Plant
	MEMO2833	Marine Transport System
	MEMO3843	Maritime Management and Law
	MEMO2513	Design for Advance Marine Vehicles
12. Offshore technology	MEMO1213	<i>(Select 3 compulsory courses & any 2 courses from this track)</i> Dynamic of Marine Structures (compulsory)
	MEMO2813	Safety, Risk and Reliability in Marine Operation (compulsory)
	MEMO2113	Strength and Vibration of Marine Structures (compulsory)
	MEMO2003	Marine Environment and Renewable Energy
	MEMO2123	Decommissioning and Recycling of Marine Structures
	MEMO2223	Mooring and Riser Analysis
	MEMO2723	Unmanned Underwater Vehicles for Offshore Operations