



REVISED COURSES SCHEME

FOR

**B.E. - M.B.A. (DUAL-DEGREE)
MECHANICAL ENGINEERING**

2016

Dual-Degree B.E.-M.B.A. (Mechanical Engineering) 2016 – Course Scheme

(For all Years)

First Semester						
S. No.	Course Number	Course Title	L	T	P	Cr
1.	UMA003	Mathematics-I	3	1	0	3.5
2.	UTA007	Computer Programming - I	3	0	2	4.0
3.	UPH004	Applied Physics	3	1	2	4.5
4.	UEE001	Electrical Engineering	3	1	2	4.5
5.	UHU003	Introduction To Professional Engineering [#]	2	0	2	3.0
6.	UTA008	Engineering Design-I	2	4	0	4.0
			16	7	8	23.5

For the students of Thapar University title of this course will be written as 'Professional Communication'

Second Semester						
S. No.	Course Number	Course Title	L	T	P	Cr
1.	UMA004	Mathematics-II	3	1	0	3.5
2.	UTA009	Computer Programming-II	3	0	2	4.0
3.	UCB008	Applied Chemistry	3	1	2	4.5
4.	UEC001	Electronic Engineering	3	1	2	4.5
5.	UES009	Mechanics *	2	1	2*	2.5
6.	UTA010	Engineering Design-II (Catapult Project) 6 Self Effort Hours	1	0	2	5.0
			15	4	8	24

* Each student will attend one lab session of 2 hrs in a semester for a bridge project in this course (mechanics).

Third Semester						
S. No.	Course Number	Course Title	L	T	P	Cr
1.	UMA031	Optimization Techniques	3	1	0	3.5
2.	UES010	Solids And Structures	3	1	2	4.5
3.	UES011	Thermo-Fluids	3	1	2	4.5
4.	UTA002	Manufacturing Processes	2	0	3	3.5
5.	UTA011	Engineering Design-III (Buggy Project) 6 Self effort Hours	1	0	4	6.0
6.	UME306	Mechanics of Machines	3	1	2	4.5
			15	4	13	26.5

Fourth Semester						
S. No.	Course Number	Course Title	L	T	P	Cr
1.	UMA007	Numerical Analysis	3	1	2	4.5
2.	UES012	Engineering Materials	3	1	2	4.5
3.	UEN004	Energy & Environment	3	0	0	3.0
4.	UME802	Mechatronics	3	0	2	4.0
5.	UME408	Machine Design-I	3	2	0	4.0
6.	UME409	Computer Aided Design & Analysis (Includes 7 Self-Effort Hours)	3	0	3	8.0
			18	4	9	28

Summer Semester- 1						
S. NO.	COURSE NUMBER	COURSE TITLE	L	T	P	CR
1.	UHU005	Humanities for Engineers	2	0	2	3.0
2.	UME515	Industrial Engineering	2	1	0	2.5
3.	UTA012	Innovation & Entrepreneurship (5 Self effort Hours) *	1	0	2	4.5
		TOTAL	5	1	4	10.0

*- Lab engagement shall be on alternate weeks.

First four semesters for BE MBA (Mechanical) dual degree Program are common with BE (Mechanical) Program.

Fifth Semester						
S.No.	Course No.	Course Name	L	T	P	Cr
1.	UME501	Applied Thermodynamics	3	1	2	4.5
2.	UME713	Fluid Mechanics & Machinery	3	1	2	4.5
3.	UME712	Heat Transfer	3	1	2	4.5
4.	UME705	Machining Science	3	1	2	4.5
5.	UME505	Manufacturing Technology	3	0	3	4.5
6.	UME404	Mechanics of Deformable Bodies	3	1	0	3.5
			18	5	11	26

Sixth Semester						
S.No.	Course No.	Course Name	L	T	P	Cr
1.	UME502	Automobile Engineering	3	0	2	4.0
2.	UME793	Capstone Project (12 self-effort hours)	0	0	4	8.0
3.	UME513	Dynamics & Vibrations	3	1	2	4.5
4.	UME807	Gas Dynamics & Turbo Machines	3	1	0	3.5
5.	UME711	Machine Design -II	3	1	0	3.5
6.	UME803	Refrigeration and Air Conditioning	3	1	2	4.5
			15	4	10	28

Summer Semester- 2						
S.No.	COURSE NUMBER	COURSE TITLE	L	T	P	CR
1.	UMEXXX	Elective I	3	1	0	3.5
2.	UME7XX	Elective II	3	1	0	3.5
3.	UME7XX	Elective III	3	1	0	3.5
		TOTAL	9	3	0	10.5

Eighth Semester						
S. NO.	COURSE NUMBER	COURSE TITLE	L	T	P	CR
1.	UME696	Project Semester	-	-	-	20.0
Or Alternate Semester						
S. NO.	COURSE NUMBER	COURSE TITLE	L	T	P	CR
1.	UME697	Group Project	-	-	-	13.0
2.	UME833	Inspection and Quality Control	3	1	0	3.5
3.	UME847	Rapid Prototyping	2	1	2	3.5
			5	2	2	20.0

OR

Start-up Semester	
This module shall be offered as an alternative to Internship for interested students. This semester will comprise of Hands-on Workshops on innovation & entrepreneurship and a project course. Students will be encouraged to extensively use Design Lab and Venture Lab.	

Elective-I						
S. No.	Course No.	Course Name	L	T	P	Cr
1.	UME832	Finite Element Methods	3	1	0	3.5
2.	UME842	Mechanics of Composite Materials	3	1	0	3.5
3.	UME805	Robotics Engineering	3	1	0	3.5
4.	UME721	Tribology	3	1	0	3.5
5.	UME722	System Modelling and Simulation	3	1	0	3.5

Elective-II						
S. No.	Course No.	Course Name	L	T	P	Cr
1.	UPE501	Work Study and Ergonomics Engineering	3	1	0	3.5
2.	UME732	CAM & Industrial Automation	3	1	0	3.5
3.	UME844	Machine Tool Design	3	1	0	3.5
4.	UPE703	Metal Forming	3	1	0	3.5
5.	UME733	Industrial Metallurgy	3	1	0	3.5

Elective-III						
S. No.	Course No.	Course Name	L	T	P	Cr
1.	UME831	Computational Fluid Dynamics	3	1	0	3.5
2.	UME834	Internal Combustion Engines	3	1	0	3.5
3.	UME852	Power Plant and Process Utility Systems	3	1	0	3.5
4.	UME839	Renewable Energy Systems	3	1	0	3.5
5.	UME853	Solar Energy Engineering	3	1	0	3.5

SEMESTER	CREDITS
FIRST	23.5
SECOND	24.0
THIRD	26.5
FOURTH	28.0
SUMMER SEMESTER-1	10.0
FIFTH	26.0
SIXTH	28.0
SUMMER SEMESTER-2	10.5
EIGHTH	20.0
TOTAL CREDITS	196.5