AE-404: Total Life Cycle Management										
L	**T**	**P**	Credit	Area		**CWS**	**PRS**	**MTE**	**ETE**	**PRE**
3	0/1	2/0	4	DEC		15/25	25/-	20/25	40/50	-

Objectives: To familiarize the students with the concept of Total Life Cycle, management of old vehicles, applying life cycle thinking to define tradeoffs. This course also introduces to sustainability, use of renewable resources

AE-404: Total Life Cycle Management		Contact Hours
Unit-1	Introduction: Definition of Total Life Cycle (TLC) – Concept of TLC - Life Cycle Impacts - Integrating Life Cycle Technologies- Products and Processes Within TLC - TLC Methodology- TLC Assessment Data to Complex Products – Resultant Improvement for Product	**8**
Unit-2	Vehicles End of Life: Design for End of Old Vehicle Management - Problems of Old Vehicles in Emerging Markets.	**6**
Unit-3	Recovery and Economic Feasibility of Materials Such as Plastic, Rubber, Aluminium, Steel, Etc	**6**
Unit-4	Tradeoffs: Applying Life Cycle Thinking to Define Tradeoffs along the Supply, Manufacture - Use and End of Life Chain- Effects on the Customer - Expectation of the Customer -Evaluate Product Cost on Fuel Consumption, Emission, Durability, Environment and Health	**8**
Unit-5	Sustainability: What Is Sustainability - Use of Renewable Resources - View to Design Horizon.	**8**
Unit-6	Harmonization of Environmental Goals: Tlc for Emerging Vs Developed Markets - Rules and Regulations to Guide Designers - International Common Practices for End of LifeVehicles	**6**
	Total	**42**

Reference Books:	
1	Life Cycle Management Case Study of an Instrument Panel /SAE, 1997/
2	Accident Reconstruction: Automobiles, Tractor-semitrailers, Motorcycles, and Pedestrians /Society of Automotive Engineers, 1987 /0898834546, 9780898834543

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Course Outcomes

CO1	To study basics of total life cycle management.
CO2	To analyses design for end of old vehicle management with its problems in emerging markets.
CO3	To discuss recovery and economic feasibility of materials.
CO4	To explain life cycle thinking to define tradeoffs along the supply, manufacture - use and end of life chain
CO5	To describe sustainability through use of renewable resources
CO6	To knowledge of environmental international common practices for end of life vehicles

CO-PO/PSOMatrix

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	0	0	0	0	0	0	2	2	1	1
CO2	3	3	2	3	1	0	0	0	0	0	0	1	2	1	1
CO3	3	3	3	3	1	0	0	0	0	0	0	2	3	3	2
CO4	3	3	3	3	1	0	0	0	0	0	0	1	3	3	2
CO5	2	2	2	2	2	0	0	0	0	0	0	1	2	2	2

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