

15AE101L - ARTIFACT DISSECTION

15AE101L	ARTIFACT DISSECTION	L	T	P	C
	Total Contact Hours 30	0	0	2	1
	Prerequisite				
	Nil				

PURPOSE

"Artifact Dissection" is an approach to teaching students about engineering concepts and design principles by having them explore the engineered products around them. "Dissection" in this context refers to a process of studying the intent and function of a mechanical system, disassembling it in order to see how this intent is realized, then reassembling it. This exploration involves having students work in small teams which lead to insight on materials, function, design alternatives, human factors and manufacturing.

INSTRUCTIONAL OBJECTIVES

The objectives of this course are to give automobile engineering students:

1.	A number of experiences in disassembling and reassembling mechanical systems / artifacts in order to be able to reason about function
2.	Insight into the importance of functional specifications in design and how they map into specific functions
3.	Awareness of the non-unique mapping between functional specifications and the final design solution (i.e., multiple solutions)
4.	The ability to communicate (orally, graphically, and textually) about the function of mechanical components.
5.	Appreciation of technological history.

LIST OF EXPERIMENTS

The dissection of a,

1. Bicycle,
2. Hand Drilling Machine,
3. Sewing Machine and
4. Two Stroke Engine.

REFERENCES

Laboratory Manuals / Manufacturers Manuals

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Course Designed by		Department of Automobile Engineering										
1	Student Outcome	a	b	c	d	e	f	g	h	i	j	k
		X	X							X		
2	Mapping of instructional objectives with student outcome	1,2,3,4,5	1,2,3,4,5							1,2,3,4,5		
3	Category	General (G)	Basic Sciences (B)	Engineering Sciences and Technical Art (E)				Professional Subjects (P)				
						X						
4	Approval	23 rd meeting of the Academic Council , May 2013										