

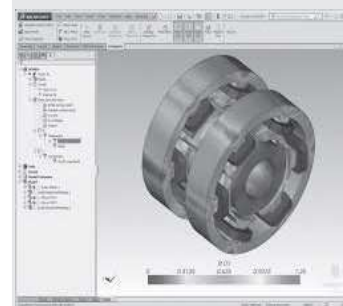
19ME404 PRODUCT PERFORMANCE ANALYSIS USING SOFTWARE PACKAGES

Hours Per Week :

L	T	P	C
-	-	3	2

Total Hours :

L	T	P	WA/RA	SSH/HSH	CS	SA	S	BS
-	-	45	-	15	-	5	-	-



Source:

<https://www.google.com/search?safe=strict&tbm>

COURSE DESCRIPTION AND OBJECTIVES:

This course deals with solving of various case studies of real time problems using software packages. The objective of this course is to make students expertise with the latest industrial software packages.

COURSE OUTCOMES:

Upon completion of the course, the student will be able to achieve the following outcomes:

COs	Course Outcomes	POs
1	Understand the working environments of various softwares.	5
2	Apply the theoretical knowledge to solve real time problems using softwares.	2,12
3	Evaluate the performance of the products.	3,4
4	Develop optimised solution for a given problem.	3,9

SKILLS:

- ✓ Use of various software's.
- ✓ Solve the real time problems using analysis softwares.
- ✓ Estimate the performance parameters of the products.
- ✓ Specify optimum solutions to the real time problems.

LABORATORY EXPERIMENTS

LIST OF EXPERIMENTS

TOTAL HOURS: 45

1. Kinematic analysis of slotted lever mechanism using **CREO/CATIA**.
2. Kinematic analysis of robotic arm with end effector **CREO/CATIA**.
3. Design of Spur gear drive using **AutoLISP**.
4. Fatigue analysis of connecting rod using **ANSYS workbench**.
5. Dynamic analysis of Reciprocating Pump using **ANSYS workbench**.
6. Structural optimization of turbine blade using **ANSYS workbench**.
7. Thermal analysis of tube in tube heat exchanger using **ANSYS FLUENT**.
8. Thermal performance prediction of fin and tube heat exchanger using **ANSYS FLUENT**.
9. Prediction of chip geometry and cutting forces in helical milling using **DEFORM**.
10. Modelling of circularity/roundness in helical milling using **DEFORM**.
11. Optimization of process parameters in milling operation using **Minitab/R programming**.
12. Reliability prediction of normally distributed stress and strength of shaft using **Minitab/R programming**.
13. Hazard estimation of given product using **Minitab/R programming**.