SNJB's LATE SAU.KANTABAI BHAVARLALJI JAIN COLLEGE OF ENGINEERING, CHANDWAD

Pre-Semester Worklist

AY 2023-24 Semester: Odd/Even

Course (subject) TH: **Design of Machine Elements(302043)** Class: TE

Faculty: H. S. Deore Prog.: 2019

Sr. No.	Expected Activity	Action plan/Remark
1.	Theory/ Practical syllabus draft taken from University website only and GAP analysis	Prepared
2.	Relevance of the subject/course in the program. (with brief history and general introduction)(kindly see at least first five NPTEL videos of the course which is available free of charge on www.nptel.ac.in)	Prepared
3.	Pre-requisites of the subject/course.	Prepared
4.	4-6 Course Outcome (CO) statements (if not mentioned by University or otherwise) with awareness of Bloom's Taxonomy	Prepared
5.	Experts/role models/industries related to the subject	Prepared
6.	Academic Calendar/Teaching plan and Course Information Sheet (CIS); awareness of online and In semester examination.	Prepared
7.	Career opportunities or Linkage of the subject/course in industry. List of such industries?	Prepared
7.	Weightage of the course in GATE Exam, Previous GATE Q-paper discussion in such forum	Prepared
8.	Identify Lecture Delivery Tools :- Black Board/ Notes/ppt/ NPTEL/Guest lecture etc.	Prepared
9.	Identify internal Assessment Tools :-Tutorials/Assignments/Unit Test Conduction (Online/Offline)/Quiz/ Group Discussion etc.	Assignments, Unit Test,
10.	Are all required reference / text books available in library?	Yes
11.	How many references you plan to refer?	3
12.	Have you plan to arrange atleast one Expert lecture or industry visit? (and its impact on GAP minimization)	Yes
13.	Have you written any article or paper regarding to your course?	No
14.	Have you planed any activity such as case study, mini project etc.?	Yes (Compulsory in syllabus)
15.	Content beyond syllabus: Are you planning to teach/conduct practical which is beyond syllabus?	Yes

16	With reference to this course your roll is as: syllabus setter/subject chairman/paper setter/moderator/examiner etc.	Examiner
17	Your plan to: explore real life problems in the subject area, students engagement and self-learning environment, something new which will create interest of the subject among students (i.e. innovation in teaching learning)	

1. Relevance of the subject/course in the program.

This subject is designed in the second course in 'Design of Machine Element" especially for the pre final year students of Mechanical Engineering. This subject comprehensively covers the design of various transmission elements and systems used in engineering applications.

The first unit introduces the fundamentals of design process and parameters of machine design process, standards, codes of machine design along with design of simple machine elements like knuckle joint, cotter joint, and levers. The second unit deals with the Design of shaft, keys and couplings. The third unit deals with the Design for Fluctuating Load. It consist concepts of Stress concentration - causes & remedies, fluctuating stresses, fatigue failures, S-N curve, endurance limit, notch sensitivity, endurance strength modifying factors along with various criteria for design against fluctuating stress. The fourth unit includes Power Screws design. The Fifth unit deals with: design of Threaded joints and Welded joints procedures. While the last unit deals with Mechanical Springs and different types of Mechanical Springs.

2. Pre-requisites of the subject/course.

a. Machine drawing,
b. Manufacturing processes,
c. Strength of Machine Element.
d. Knowledge of Manufacturing tolerances, surface finish symbols and geometric tolerances.

3. Experts/role models/industries related to the subject

1. TATA Group
2. Kirloskar
3. Godrej Group
4. Larsen & Toubro (L&T)
5. Thyssen Krupp
6. Thermax Siemens
7. Suzlon
8. BOSCH India

9. ABB Group
10. Crompton Greaves
11. Bajaj Automobiles.
12. Bharat Heavy Electricals Limited
13. Defense Research & Development Organization
14. Indian Space Research Organization

4. Career opportunities or Linkage of the subject/course in industry. List of such industries.

Top Most Recruiter of Mechanical Design Engineer:

1. TATA Group
2. Kirloskar
3. Godrej Group
4. Larsen & Toubro (L&T)
5. Thyssen Krupp
6. Thermax Siemens
7. Suzlon
8. BOSCH India
9. ABB Group
10. Crompton Greaves
11. Bajaj Automobiles.
12. Bharat Heavy Electricals Limited
13. Defense Research & Development Organization
14. Indian Space Research Organization.