Instructor:
    Name: Dr. Madhu Karthik M
    Office: 121
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Class Hours:

Monday:	09:00 to 09:50	Tuesday:	10:00 to 10:50
Wednesday:	12:00 to 12:50	Friday:	08:00 to 08:50

Textbooks and References:

- Kassimali, A. (2015). *Structural Analysis*. Delhi: Cengage Learning India Pvt. Ltd.
- Menon, D. (2008). *Structural Analysis*. New Delhi: Narosa Publishing House.
- Hibbeler, R.C. (2006). *Structural Analysis.* New Delhi: Pearson Education.
- Wang, C-K. (1983). *Indeterminate Structural Analysis.* New Delhi: McGraw Hill Education.

Course Website:
    http://turing.iitpkd.ac.in/moodle

Learning Objectives: The course will introduce students to:
- Analysis of beams, trusses, frames, and arches
- Deflection of beams, trusses, and frames.
- Analysis of moving loads, and its application in computing critical loads
- Force and displacement methods for the analysis of statically indeterminate structures

Major Course Content:
    Analysis of statically determinate structures – beams, frames and trusses; shear force diagram, bending moment diagram, qualitative deflected shape; deflection – geometric methods (moment-area method, conjugate-beam method), work-energy methods (virtual work, Castigliano's theorem); influence line diagrams and it's applications; analysis of statically indeterminate structures – force methods (method of consistent deformations, three-moment equation, method of least work) and displacement methods (slope-deflection method, moment-distribution method).

Learning Outcomes: At the end of the course, the student should be able to:
- Analyze beams, frames, and trusses to compute the reactions and member forces
- Evaluate critical loads due to moving loads
- Analyze statically determinate and statically indeterminate structures
- Compute deflections in statically determinate and statically indeterminate structures

Grading:
    The letter grade for this course will be based upon grades from assignments, tutorials, assessment tests (ATs), two scheduled tests, and a end semester as follows:

Assignments/Tutorials/ATs	20%
Quiz I	20%
Quiz II	20%
Final Exam	40%

Exams:

There will be two tests and an end semester as per the academic calendar. It is your responsibility to show up for the scheduled exams and take them at the appointed time.

Attendance and ATs:

Attendance in class is mandatory. A student who has less than 85% attendance in the class, will not be permitted to appear in the end-semester examination. To assess student knowledge and preparedness, announced and unannounced assessment tests (ATs) may be given at random during class periods at the discretion of the instructor. These ATs may and often will be over covered material or assigned reading material.

Assignments and Tutorials:

Your best preparation for the exams is thoughtful, diligent effort on the ATs, assignment, and tutorial problems.

All assignments due in class must be turned in at the beginning of class on the day the assignment is due. Assignments/tutorials not turned in on time will be considered late and will be subject to a penalty of 25% per day for a maximum of two days. Homework that is more than two days late will not be accepted.

Assignments/tutorials will be checked/graded only if the solution appears to be substantially complete. It is the students' responsibility to submit any work in a neat and legible manner. The instructor shall not make efforts to interpret the students work. Unacceptable and generally sloppy homework will be returned for no credit.

Prepare formal hand-written solutions (unless otherwise mentioned) on A4 paper using a pen. Figures drawn to solve problems should be neat and legible. Draw detailed free body diagrams (as and when required) in support of your solution. Work submitted on paper torn out of a notebooks will not be accepted. Begin each new problem on a new sheet. Your name, course, date of submission, and total number of pages must appear on the top right of the submission. Staple all sheets for each assignment into a single packet. Loose sheets of papers will not be accepted, and the instructor is not responsible for lost/misplaced sheets.

Re-Assessment Policy:

Great care is taken to ensure that your homework/tutorial problems, assessment tests, and quizzes are assessed correctly, fairly and consistently. However, there may be instances when a mistake has been made in assessing your work. If you feel that there has been a mistake, you must submit the work for re-assessment within 48 hours after it has been returned to you. Any work submitted after this 48-hour period will not be re-assessed. (Note that this policy does not apply to the final exam, which shall be re-examined as per the B.Tech ordinances and regulations of IIT Palakkad).

When you resubmit the work for re-assessment, you must attach a formal written statement indicating where you feel you deserve points back. The entire problem is then open for a re-assessment, and your new score may be higher or lower than before.

Discussions about assessment procedure is not entertained. However, I will be happy to discuss the material and concepts covered in the problem with you during office hours.

Academic Integrity Statement:

No form of scholastic misconduct will be tolerated. Academic misconduct includes copying, cheating, fabrication, falsification, multiple submissions, plagiarism, complicity, etc. Violations will be reported to the disciplinary committee, and handled appropriately.

Copyright Statement:

The handouts used in this course are copyrighted. By "handouts," it is meant that all materials that have been generated for this course. Such materials include but are not limited to syllabi, quizzes, exams, problem sets, worked problems, materials presented on the course website, in-class materials, review sheets, additional problem sets, and/or solutions prepared for these materials. Because these materials are copyrighted, you do not have the right to copy them, or possess copies of them outside of the normal course uses for which they are intended.