

ME 0022 Kinematics of Machinery
Summer 2005, Thursday 4 – 6:30 pm (722 BEH)
<http://www.pitt.edu/~hshst7/ME0022.htm>

Instructor:

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Office hours: Wednesdays 4 – 6 pm

Textbook:

Kinematics, Dynamics, and Design of Machinery, 2nd edition, by Kenneth J. Waldron and Gary L. Kinzel, John Wiley & Sons, 2004.

Homework:

Homework assignments will be given and graded every week.
Homework is due at the start of class and no late homework will be accepted.

Team Project:

Students will work in teams to complete a design project. The output will include a presentation, and a written report describing the results of the project. Further details will be provided.

Attendance Policy: Attendance of classes is mandatory. If a student has a valid excuse for missing a class, they must inform the instructor beforehand.

Prerequisites:

MATH 0240, ENGR 0135, and ME 0024

Exams:

Two exams and one final.
The final examination will be on Thursday, August 04, from 4 – 6:30 pm at R722 BEH

Grading: If you have above 90 % in both 2 exams, letter grade A will be given and you do not need to take final exam

Semester grades will be computed as follows:

Homework	20%
Design projects	20%
Exam 1	20%
Exam 2	20%
Final	20%
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Total	100%

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Week	Date	Chapter	Subject	Homework
1	May 5, 2005	1	Course overview: Planer Linkage, degrees of freedom & motion	
2	May 12, 2005	2	Graphical position & velocity analysis	
3	May 19, 2005	2	Graphical velocity & acceleration analysis	
4	May 26, 2005	2 & 4	Graphical acceleration analysis, Image theorem & instant center	
5	June 2, 2005	Exam 1		
6	June 9, 2005	5	Analytical analysis of four-bar linkage	
7	June 16, 2005	5	Analytical analysis of slider crank and other mechanisms	
8	June 23, 2005	6	Double rocker & motion generation	
9	June 30, 2005	8	Uniform, parabolic, Harmonic & cycloidal motions (assign project)	
10	July 7, 2005	Exam 2		
11	July 14, 2005	8	cycloidal motion, follower & cam design	
12	July 21, 2005	10	Spur gears, contact ratio & gear profile	
13	July 28, 2005	12	(Gear trains) Presentation and review	
14	August 4, 2005	Final		
No Chapters 3, 7, 9 & 11				