Date | Day | Mtg. # | Topics | Problems |
--- | --- | --- | --- | --- |
1/17 | W | 1 | Rectilinear motion | 9.8, 15, 21 |
19 | F | 2 | Dependent rectilinear motion | 9.29, 32, 34 |
22 | M | 3 | Graphical solution | 9.40, 42, 46 |
24 | W | 4 | Curvilinear motion | 9.54, 58, 64 |
26 | F* | 5 | Review, Hw, & Quiz | |
29 | M | 6 | Curvilinear motion | 9.69, 76, 90 |
31 | W | 7 | Force and acceleration (particles) | 10.1, 9, 20 |
2/2 | F* | 8 | Review, Hw, & Quiz | |
5 | M | 9 | Equations of motion (particles) | 10.35, 37, 44 |
7 | W | 10 | Central-force motion | 10.59, 61, 62 |
9 | F* | 11 | Review, Hw, & Quiz | |
12 | M | 12 | Trajectory of spacecraft | 10.63, 64, 69 |
14 | W | 13 | Trajectory of spacecraft | 10.70, 72, 85 |
16 | F* | 14 | Review, Hw, & Problem 4 of Test I | |
19 | M | 15 | Test I (Chaps.9--10), 5:00 p.m. – 7:00 p.m., in BELL 2282 |
21 | W | 16 | Work and energy (particles) | 11.13, 21, 31 |
23 | F | 17 | Potential energy, cnsvtn of energy | 11.37, 42, 47 |
26 | M | 18 | Conservation of energy, virtual work | 11.51, 57, 60 |
28 | W* | 19 | Review, Hw, & Quiz | |
3/2 | F | 20 | Impulse and momentum (particles) | 11.66, 78, 82 |
5 | M | 21 | Central-force motion | 11.96, 98, 102 |
7 | W | 22 | Impact, generalized virtual work | 11.111, 115, 124 |
9 | F* | 23 | Review, Hw, & Quiz | |
12 | M | 24 | Plane motion of rigid bodies | 12.4, 7, 8 |
14 | W | 25 | Accelerations, acceleration center | 12.39, 58, 70 |
16 | F | 26 | Parametric method | 12.72, 74 |
26 | M* | 27 | Review, Hw, & Problem 4 of Test II | |
28 | W | 28 | Test II (Chaps.11--12), 5:00 p.m. – 7:00 p.m., in BELL 2282 |
30 | F | 29 | Mass moments of inertia | 13.5, 7, 17 |
4/2 | M | 30 | Force and acceleration (rigid bodies) | 13.51, 57, 68 |
4 | W | 31 | Constrained general plane motion | 13.84, 91 |
6 | F | 32 | Constrained general plane motion | 13.98, 105 |
9 | M* | 33 | Review, Hw, & Quiz | |
11 | W | 34 | Work and energy (rigid bodies) | 14.4, 8, 14 |
13 | F | 35 | Conservation of energy | 14.38, 46, 50 |
16 | M | 36 | Work and energy, virtual work | 14.60, 69, 70 |
18 | W* | 37 | Review, Hw, & Quiz | |
20 | F | 38 | Impulse and momentum (rigid bodies) | 14.77, 88, 95 |
25 | W | 40 | Generalized virtual work | 14.127, 167, 169 |
27 | F* | 41 | Review, Hw, & Problem 4 of Test III | |
30 | M | 42 | Test III (Chaps.13--14), 5:00 p.m. – 7:00 p.m., in BELL 2282 |
5/2 | W | 43 | General Review | |
9 | W | 44 | tbd | Final Exam (12:45 p.m. – 2:45 p.m.) |

* During the early part of this class meeting, a homework will be collected.
[quiz] A 20-25-min quiz will be given on the topics already covered in previous meetings.

Sample quizzes, sample tests, class notes, paper, software, and others are available on the ICJ Home Page at: [http://comp.uark.edu/~icjong/](http://comp.uark.edu/~icjong/).
About the Course

2013-001 (1188) MWF (11:50 a.m. - 12:40 p.m.) BELL 2282, Spring 2018

Instructor: Ing-Chang Jong, Ph.D., P.E. Office: MEEG 204E Phone: (479) 575-4350
Professor of Mechanical Engineering E-mail: icjong@uark.edu

TA: (a) Guillain Rurangwa, (b) Abby Bishop

Drill Tutor: Abby Bishop

Drill Sessions:
- Tuesdays: 6:00 p.m. – 8:00 p.m., BELL 2269
- Thursdays: 6:00 p.m. – 8:00 p.m., BELL 2267

Supplies: Calculator, engineering paper, mechanical pencil, eraser, transparent 6-in. plastic ruler, and compass or template for drawing circles.

Homework, Quizzes, Tests, and Grades

Dynamics is a course aimed at developing in students the concepts and skills related to the analysis and prediction of conditions of bodies under the action of unbalanced force systems. The evaluation of your performance and achievement in this course will be based on the following:

- 10 collections of homework (each worth 5 points),
- 7 quizzes (each worth 10 points),
- 3 tests (each worth 100 points),
- n pop quizzes (each worth 5 points),
- and a final exam (worth 100 points).

The total maximum score you can possibly earn in this course is, therefore, 520 + 5n points. You are required to have a student ID when you take the three scheduled tests and the final exam. (A rule: failure to have the required ID or failure to observe the seating assignments during scheduled tests, –5 points.) Full credit makeups for any of the scheduled events are to be approved in advance by the instructor; otherwise, the approval may require a proof of emergency.

Scheduled tests. Each of the three scheduled tests (Test I, Test II, & Test III) will contain the following:

- Problem 1 & 2: These are similar to the homework or example problems. To receive full credit, your solutions need to include pertinent sketches or diagrams, setup of equations, intermediate steps in the solutions, and final answers with appropriate number of significant digits as well as correct units. (60 points)
- Problem 3: Multiple-choice questions with different numbers are given to students. Grading is based on the correct choices you circled on the test sheet. (20 points, no partial credit)
- Problem 4: Non-numerical problem, covering descriptions of terms, laws, and principles, or derivations of formulas; given in the meeting preceding the test (20 points)
- Contingent bonus points: To be explained in class.

Grades. Except involvement in academic dishonesty or an unusual case (e.g., lack of civility or breach of decorum in class), your final grade will be at least A, B, C, and D if your final overall average score in this course is at least 91%, 81%, 71%, and 61%, respectively. Nevertheless, a grading curve in favor of the class may be employed at the discretion of the instructor.

Advice

- Silence your cell phone during class meetings.
- Review and study the various items (e.g., syllabus, guides, class notes, sample quizzes, sample tests, computer software, papers, etc.) that have been posted online. Ask your questions in class, complete the homework after class, and attend Drill Sessions to get additional needed help from the Drill Tutor.
- The best time to get needed help from the instructor is during 12:30 p.m. – 1:30 p.m. on Tuesdays and Thursdays in his office, unless he has other meetings during the indicated time.
- Normally, a student needs to reserve 6 hours per week (about twice the class time) outside the class for the reading, doing homework, and getting needed help.