

**Instructor:** Jordan Zink (jzink@andrew.cmu.edu)

**Course Website:** <http://www.andrew.cmu.edu/~jzink/98-186>

**Course Objective:** To provide students with a comprehensive overview of roller coasters, both from a historical / background perspective and a design perspective.

**Course Outline:** Below is the preliminary schedule, which could change during the semester. Note that we will not have class during the week of Spring Break (duh) but will have class during the week of Carnival.

Week 01 (01/13)	.....	Introduction
Week 02 (01/20)	.....	Origins; Invention
Week 03 (01/27)	.....	Basics of Coaster Design
Week 04 (02/03)	.....	First Golden Age; Revival; Steel Coasters
Week 05 (02/10)	.....	Early Manufacturers
Week 06 (02/17)	.....	Modern Manufacturers
Week 07 (02/24)	.....	Identification; Inversions; Failures
Week 08 (03/03)	.....	Coaster Physics
Week 09 (03/10)	.....	<b>NO CLASS</b> (Spring Break)
Week 10 (03/17)	.....	Heartlining; Track Shaping; FVD with Newton
Week 11 (03/24)	.....	<b>NO CLASS</b> (Hands-On Building Cancelled)
Week 12 (03/21)	.....	Amusement Parks part 1 (History, Chains, Design)
Week 13 (04/07)	....	Amusement Parks part 2 (North America, Europe, Asia)
Week 14 (04/14)	.....	Design Theory
Week 15 (04/21)	.....	Disney World
Week 16 (04/28)	.....	Modern Trends; Final Topics

**Grade Policy:** By CMU policy, all StuCos must be Pass/No Pass. Grades will be calculated as the average of 5 different components: attendance, video watching, 1990 coaster design, identification practice, and the final project. The final project is weighted double. Students with an average of 65% or above will receive a Pass (it should be easy, and is easy, to Pass).

**Attendance:** Attendance is taken every class. Absences for reasons like illness, athletic event, or job interviews should be approved with the instructor prior to said absence. Otherwise the absence is unexcused. Grades will be calculated as follows

Unexcused Absences	0	1	2	3	4 or more
Grade	100%	90%	65%	35%	0%

An unexcused absence can be forgiven by doing some extra work. Email the instructor if you are interested. This can be done once.

**Assignments:** There will be several assignments throughout the semester. All assignments details will be released on the course website. All assignments are solo work except for the final project, in which groups will be permitted. The assignments are:

- Video Watching - Watch on-ride videos of roller coasters to view a variety of different coaster types and styles.
- 1990 Coaster Design - Design a coaster for any amusement park as if it was 1990.
- Identification Practice - Practice identification of roller coasters via an online activity. This will include identifying wood or steel, manufacturer, types, and inversions.
- Final Project - Students will create a final project as a culmination of all the knowledge they've gained over the semester. The prompt will be released later in the semester, but coaster design will be involved.

**Assignment Submission:** All assignments will be submitted electronically via email. No need for hard copies.

**Due Dates:** These due dates are enforced so that you don't push back everything to the last week. All due dates are at 11:59 PM (except the in class one).

Video Watching .....	Week 05 (February 10 <sup>th</sup> )
1990 Coaster Design .....	Week 07 (February 24 <sup>th</sup> )
Identification Practice .....	Week 08 (March 3 <sup>rd</sup> )
Final Project .....	Week 16 (April 28 <sup>th</sup> )

**Late Policy:** You may turn in any of the above assignments (including the Final Project) up to a week late for half credit.

**Cheating:** 98-186 is a real CMU course for which you receive CMU credit, meaning CMU's academic integrity policy applies. Violations of the academic integrity policy will result in an immediate "No Pass" grade and the student will be reported. Don't do it.

**Contacting Me:** If you have questions or issues, email me at [jzink@andrew.cmu.edu](mailto:jzink@andrew.cmu.edu). Since I CA 15-112, I should respond to emails promptly. You can also talk to me before or after class.

**Resources:** Each week will have corresponding notes or Power Points posted on the course website. In addition, you may find the following websites useful:

- <http://www.rcdb.com> - The best website ever. Has information and pictures of pretty much every coaster.
- <http://www.screamscape.com> - Roller coaster news and rumors
- <http://www.themeparkreview.com> - Tour group that has large enthusiast community and posts quality trip reports.
- <http://www.youtube.com> - Best place to find coaster videos (really)