For purposes of this class, academic dishonesty is defined as:

- much if you cheat but you might get a good grade if you get away with it. If all you want is a good grade take an assignment.

This is a challenging class aimed at teaching you the fundamentals of computer graphics. You won't learn everything in this course, but the code MUST be your own) in which the collaborating parties don't clearly and prominently explain how the code works. Academic Honesty is a very serious matter and can result in very serious consequences. Note that academic misconduct will not be tolerated and will result in serious consequences, including but not limited to failure in the course, expulsion from the program, and legal action.

Assignments are due by 11:59pm on the three due dates below.

**Assignments (top 5 of 6)**

- **Assignment 1 (1D mass-springs)**
- **Assignment 2 (3d mass-springs)**
- **Assignment 3 (shape matching)**
- **Assignment 4 (finite elements for cloth simulation)**
- **Assignment 5 (final project)**

**Term Projects**

- **Research Highlight**
- **Course Overview**
- **Lecture Schedule**
- **Helpful Resources**
- **Links**
- **Email & Bulletin Board Traffic**
- **Deadlines Directly Above This Text**
- **Lateness Policy**
- **Final Project**
- **Grading Scheme**
- **Late Policy**
- **Reading**
- **Grading Scheme**
- **Weekly Assignments**
- **Discussion board using**
- **MarkUs**
- **Email Instructor and TAs:**
  - [diwlevin@cs.toronto.edu](mailto:diwlevin@cs.toronto.edu)
  - [Yixin Chen](mailto:yi.chen@utoronto.ca)
  - [csc417tas@cs.toronto.edu](mailto:csc417tas@cs.toronto.edu)

**Assignments (bottom 1 of 6)**

- **Tutorial Only (Catch up, last minute questions about Assignments 1-4)**
- **Tutorial Only (Last Minute Questions about A5-6, Final Project)**
- **Variational Stokes**
- **The Material Derivative**
- **Rigid Body Collision**
- **Rigid Body Mechanics**
- **Rigid Body Dynamics**
- **Drop date (consider if grade so far is <50%)**
- **Assignment 1 (1D mass-springs)**
- **Assignment 2 (3d mass-springs)**
- **Assignment 3 (shape matching)**
- **Assignment 4 (finite elements for cloth simulation)**
- **Assignment 5 (final project)**
- **Assignment 6 (report)**

**Lectures**

- **Monday 09:30-10:30**: Introduction
- **Monday 11:00-12:00**: Rigid body mechanics
- **Monday 12:30-13:30**: Tutorial
- **Monday 14:00-15:00**: Rigid body dynamics
- **Monday 15:30-16:30**: Tutorial
- **Tuesday 09:00-10:30**: Rigid Body Collision
- **Tuesday 11:00-12:00**: Rigid Body Mechanics
- **Tuesday 12:30-13:30**: Tutorial
- **Tuesday 14:00-15:00**: Rigid Body Dynamics
- **Tuesday 15:30-16:30**: Tutorial
- **Wednesday 09:00-10:30**: Rigid Body Collision
- **Wednesday 11:00-12:00**: Rigid Body Mechanics
- **Wednesday 12:30-13:30**: Tutorial
- **Wednesday 14:00-15:00**: Rigid Body Dynamics
- **Wednesday 15:30-16:30**: Tutorial

**Final Project**

- **The Final Project must be handed in by December 17th at 11:59pm.**
- **Assignments 1, 2, 3, 4 must be handed in by December 14th at 11:59pm.**
- **Assignments (top 5 of 6) due by 11:59pm:**

**Lateness Policy**

- Late work is accepted up to 5pm on the due date.
- Late work is accepted up to 5pm on the due date.
- Late work is accepted up to 5pm on the due date.

**Assignments**

- **Assignment 1 (1D mass-springs)**
- **Assignment 2 (3d mass-springs)**
- **Assignment 3 (shape matching)**
- **Assignment 4 (finite elements for cloth simulation)**
- **Assignment 5 (final project)**

**Grading Scheme**

- Assignments (top 5 of 6): 40%
- Assignments (bottom 1 of 6): 40%
- Final Project: 20%

**Final Project**

- The Final Project must be handed in by December 17th at 11:59pm.
- Assignments 1, 2, 3, 4 must be handed in by December 14th at 11:59pm.
- Assignments (top 5 of 6) due by 11:59pm.

**Assignments (bottom 1 of 6)**

- **Tutorial Only (Catch up, last minute questions about Assignments 1-4)**
- **Tutorial Only (Last Minute Questions about A5-6, Final Project)**

**Research Highlight**

- **Mass-spring systems in three dimensions**
- **Gradients and Hessians**
- **Calculus of Variations**
- **The Variational Principles of Mechanics**

**Helpful Resources**

- **Geometric Tools (Website)**
- **Matrix and Linear Algebra Identities (PDF)**
- **FEM Simulation of 3D Deformable Solids (Website)**
- **Fluid Simulation for Graphics (Notes)**
- **Calculus of Variations**
- **The Variational Principles of Mechanics**

**Links**

- **Calculus of Variations**
- **The Variational Principles of Mechanics**

**Lectures**

- **Monday 09:30-10:30**: Introduction
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- **Monday 12:30-13:30**: Tutorial
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- **Wednesday 11:00-12:00**: Rigid Body Mechanics
- **Wednesday 12:30-13:30**: Tutorial
- **Wednesday 14:00-15:00**: Rigid Body Dynamics
- **Wednesday 15:30-16:30**: Tutorial

**Assignments**

- **Assignment 1 (1D mass-springs)**
- **Assignment 2 (3d mass-springs)**
- **Assignment 3 (shape matching)**
- **Assignment 4 (finite elements for cloth simulation)**
- **Assignment 5 (final project)**

**Grading Scheme**

- Assignments (top 5 of 6): 40%
- Assignments (bottom 1 of 6): 40%
- Final Project: 20%

**Final Project**

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- Assignments 1, 2, 3, 4 must be handed in by December 14th at 11:59pm.
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