## Course Outline:

### Monday 1/19/2015
- **9:00 am - 10:30 am**
  - Class Organization
- **10:30 am - 12:00 noon**
  - Lecture Lecture
- **12:00 noon - 1:00 pm**
  - Lunch
- **1:00 pm - 2:00 pm**
  - Lecture
- **2:00 pm - 3:00 pm**
  - Lecture
- **3:00 pm - 4:00 pm**
  - Lecture

### Tuesday 1/20
- **9:00 am - 10:30 am**
  - Envelope Equations
- **10:30 am - 12:00 noon**
  - Lecture Lecture
- **12:00 noon - 1:00 pm**
  - Lunch
- **1:00 pm - 2:00 pm**
  - Lecture
- **2:00 pm - 3:00 pm**
  - Lecture

### Wednesday 1/21
- **9:00 am - 10:30 am**
  - Injectors/Longitudinal Beam Physics I
- **10:30 am - 12:00 noon**
  - Lecture Lecture
- **12:00 noon - 1:00 pm**
  - Lunch
- **1:00 pm - 2:00 pm**
  - Lecture
- **2:00 pm - 3:00 pm**
  - Lecture

### Thursday 1/22
- **9:00 am - 10:30 am**
  - Longitudinal Beam Physics II
- **10:30 am - 12:00 noon**
  - Lecture Lecture
- **12:00 noon - 1:00 pm**
  - Lunch
- **1:00 pm - 2:00 pm**
  - Lecture
- **2:00 pm - 3:00 pm**
  - Lecture

### Friday 1/23
- **9:00 am - 10:30 am**
  - Longitudinal Beam Physics III
- **10:30 am - 12:00 noon**
  - Lecture Lecture
- **12:00 noon - 1:00 pm**
  - Lunch
- **1:00 pm - 2:00 pm**
  - Lecture
- **2:00 pm - 3:00 pm**
  - Lecture

### Monday 1/26
- **9:00 am**
  - Envelope Modes in Cont Focusing and Halo
- **10:30 am**
  - Transverse Centroid and Envelope Models I
- **12:00 noon**
  - Lunch
- **1:00 pm**
  - Tran. Cen. Env. Models I
- **2:00 pm**
  - Carry Over
- **3:00 pm**
  - Carry Over + Recitation AP

### Tuesday 1/27
- **9:00 am**
  - Pressure/Scattering/ Electron Effects
- **10:30 am**
  - Transverse Centroid and Envelope Models II
- **12:00 noon**
  - Lunch
- **1:00 pm**
  - Tran. Cen. Env. Models II
- **2:00 pm**
  - Carry Over
- **3:00 pm**
  - Carry Over + Recitation AP

### Wednesday 1/28
- **9:00 am**
  - Heavy Ion Fusion/ Final Focusing
- **10:30 am**
  - Transverse Kinetic Stability I
- **12:00 noon**
  - Lunch
- **1:00 pm**
  - Tran. Kin. Stability I
- **2:00 pm**
  - Carry Over
- **3:00 pm**
  - Carry Over + Recitation AP

### Thursday 1/29
- **9:00 am**
  - Review of Material
- **10:30 am**
  - Transverse Kinetic Stability II
- **12:00 noon**
  - Lunch
- **1:00 pm**
  - Tran. Kin. Stability II
- **2:00 pm**
  - Carry Over
- **3:00 pm**
  - Carry Over + Recitation AP

### Friday 1/30
- **9:00 am**
  - Simulation Techniques
- **10:30 am**
  - Final Exam Review
- **12:00 noon**
  - Lunch
- **1:00 pm**
  - Final Exam Review
- **2:00 pm**
  - Carry Over
- **3:00 pm**
  - Carry Over + Recitation AP

---

**Homework:**
- **Monday 1/19/2015:** Homework 1
- **Tuesday 1/20:** Homework 2
- **Wednesday 1/21:** Homework 3
- **Thursday 1/22:** Homework 4
- **Friday 1/23:** Homework 5
- **Monday 1/26:** Homework 6
- **Tuesday 1/27:** Homework 7
- **Wednesday 1/28:** Homework 8
- **Thursday 1/29:** Take-home final

**Carry Over:** Over time lectures will be caught up prior to the Recitation to avoid falling behind schedule.

**Homework:** Collaboration with other students in class and hints from grader or instructors are allowed. (80% of grade)

**Take-Home Final:** No collaboration allowed (20% of grade)