

Course Name	Physics I		
Semester, Year	First Semester, 2019	Number of Credits	2 credits
Course level	1000	Course Number	027018
Instructor(s) (Institution)	Eun-Kyung PARK 大学院理学研究院		
Course Objectives	In Physics I, students will study matter and energy, their properties and the relation between them. This course covers Newtonian mechanics including: kinematics, the laws of motion, work and energy, systems of particles, momentum, circular motion, waves and Optics.		
Course Goals	The goal of this course is to provide students with understanding of principles and methods of physics by solving problems in physics and mathematics. Students will work on various interactive examples through the course.		
Course Schedule	<p>Week 1: Course syllabus introduction and how to read a science article</p> <p>Week 2: Mechanics: the importance of units & Motion in 1D</p> <p>Week 3: Mechanics: motion in 2D and 3D</p> <p>Week 4: Mechanics: circular motion and Newton's Laws</p> <p>Week 5: Mechanics: forces</p> <p>Week 6: Mechanics: work and energy</p> <p>Week 7: Mechanics: conservation of energy</p> <p>Week 8: Mechanics: momentum and rotation</p> <p>Week 9: Waves: oscillatory motion</p> <p>Week 10: Waves: wave motion</p> <p>Week 11: Waves: fluid motion</p> <p>Week 12: Optics: reflection and refraction</p> <p>Week 13: Optics: mirrors and lenses</p> <p>Week 14: Optics: interference and diffraction</p> <p>week 15 Final exam</p>		
Homework	Homework will be given every two weeks in class and there will be one exam on the final day of the course.		
Grading System	Grades will be based on participation (20%), homework (40%), final exam (40%). Distribution of grades will be approximately 20% Excellent, 30% Very good, 40% Good, Pass 10%.		
Textbooks / Reading List	<p>Fundamentals of Physics: Mechanics, Relativity, and Thermodynamics (The Open Yale Courses Series) R. Shankar Yale University Press</p> <p>Fundamentals of Physics II: Electromagnetism, Optics, and Quantum Mechanics (The Open Yale Courses Series) R. Shankar Yale University Press</p>		
Websites			
Website of Laboratory			
Additional Information	Lectures and quizzes are given using an audience response system (clickers).		