Seven Ideas that Shook the Universe
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Seven Ideas that Shook the Universe (Physics 11030) is an introductory science course designed to meet the general science requirement (Basic Sciences LER) for most students at Kent State University. It is a course which serves as a foundation for other scientific courses because it is the study of the rules which govern our physical universe.

Students attend three 50 minute or two 75 minute lectures each week for 15 weeks. At the end of the first five weeks, Exam I is administered with 33 multiple choice questions. At the end of the 10th week, another 33-question exam is given and the comprehensive final exam at the end of the course has 34 questions. This gives a total of 100 questions. The grade is determined solely by these exams using the following 10% scale:

Total questions correct out of all three exams	Course Grade
90-100	A
80-89	B
70-79	C
60-69	D

Basic Grading Scale for Seven Ideas Course

Based on over 30,000 students, who took this course between 1981 and 2003 the average grade was 74 (C).

In order for students to check their progress, they are strongly encouraged to answer the questions in the Seven Ideas Workbook before answers are given in class. To further help the student, sample exam questions are included at the end of the Supplementary Notes. Answers to the self-evaluation questions in the Workbook are also provided at the web site as are additional interactive sample exams.

The lectures have been recorded on audio cassettes. If a student misses a class and is interested in borrowing one of these cassettes, arrangements can be made with his or her instructor.

Because of the large number of students taking this course, we are able to provide additional help sessions arranged each semester. The schedule for these can be obtained from the instructor. In addition, students with special needs can obtain additional assistance through Student Disability Services.

Example of University Class Syllabus
Please make adaptations as necessary for your program.

Monday, Wednesday, and Friday Classes

S. Notes Chap.	Text Pages	Class Meeting	Idea No.	Lecture
1	2-7	1		Introduction
2	8-22	2		Scientific Method and Space
3	8-22	3		Time, and Matter
4		4		The Earth and the Observer's Sky
5	23-31	5		Celestial Sphere and Copernican Theory
6	31-37	6	# 1	Heliocentric Theory
7	38-41	7		Planetarium
8	42-50	8		The Planets and Kepler's Laws
9	56-60	9		Uniform Motion and Relative Velocity
10	67-69	10		Acceleration
11	61-81	11		Velocity Time Graphs
12	206-215	12		Isotropic Property of Space and Force
13	81-93	13	#2	Newton's Laws
		14		Review for Exam
		Monday Oct. 2		**Exam I 33 questions multiple choice Chapters 1-13**
14		16		Math Examples and Newton's Laws
15		17	#3	Circular Motion
16	98-101	18		Work and Energy
17	116-120	19		Kinetic and Potential Energy
18	101-103	20		Heat and Temperature
19	104-116	21	#4	Conservation of Energy

20	121-136	22		Absolute Zero and Entropy
21	136-161	23		Transfer of Heat
22	136-161	24		Phases of Matter
23		25		Pressure
24		26		Nature of Liquids and Gases
		Monday Oct. 30		**Exam II 33 questions multiple choice Chapters 14-24**
25	175-183	28		Introduction to Waves Part I
25	175-183	29		Introduction to Waves Part II
27	183-185	30		Electromagnetic Waves
28		31		The Electromagnetic Spectrum
29		32		Coherent Light and Laser
30		33		Reflection, Transmission and Absorption
31		34		Phosphoresence, Fluorescence, Doppler Effect
32	229-234	35		Big Band Theory, Refraction
33	237-240	36		Diffraction, Polarization, Interference
34	220-229	37	#6	Photoelectric Effect and Bohr Theory
35	240-257	38		Ultraviolet Catastrophe and Quantum Theory
36	188-206	39		Matter Waves and Uncertainty Principle
37	262-280	40	#5	Michelson Morley Experiment and Relativity
38		41	#7	Nuclear Physics and Conservation Laws
		42		Review for Final