Lincoln University

Sci 10 – Physical Science

COURSE SYLLABUS

Spring 2021

Professor: Prof. Sergey Aityan, PhD, DSc

Lecture Schedule: Wednesday, 9:00 PM – 11:45 PM
Credits: 3 units
Level: Introductory (I)
Office Hours: Tuesday, 11:45 AM – 12:30 PM
Wednesday, 11:45 AM – 12:30 PM
Additional office hours by appointment.

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Textbook: **1. Course lectures notes:**
James T. Shipman, Jerry D. Wilson, and Aaron W. Todd (2015), An Introduction to Physical Science, 14th Edition, Cengage Learning, 800 p.
ISBN-13: 978-1305079137
ISBN-10: 1305079132
*** previous editions of this book are okay too ***

Last Revision: January 18, 2021

CATALOG DESCRIPTION

The study of matter and energy; principles and practical applications in physics, chemistry, mechanics, heat, sound, electricity, electronics, geosciences and astronomy.
(3 units)

COURSE OBJECTIVES

To introduce students to the foundations of Physical Science, its major concepts, facts, phenomena, and measurements.

REQUIREMENTS

Continuous assessment is emphasized. Written or oral quizzes will be given every week. Reading and writing home tasks, problem solving, and "business case study" assignments will be made throughout the course. Students must complete all home tasks, other assignments, and take all quizzes, mid-term exam and final exam on the dates due. Zero

tolerance to plagiarism and cheating is enforced. Plagiarism or cheating will result in grade "F" (with zero points) and a report to the administration.

ATTENDANCE
Students are expected to attend each class session. If you cannot attend class due to a valid reason, please notify the instructor prior to the class.

EXAMS
Both, midterm and final exams are multiple choice exams.
Exams will cover all assigned chapters, any additional readings or supplementary materials covered in class. The final exam is comprehensive, i.e. includes the whole course. The exams are neither "open book" nor "open notes."
Cheating in exam results in immediate termination of the exam, grade "F" with ZERO points, and report to the dean.

The instructor reserves the right to replace the written exam with a verbal exam if finds appropriate.

GRADING AND SCORING
All activities will be graded according to the points as shown below.

Grade	A	A-	B+	B	B-	C+	C	CR	NC
Points	94-100	90-93	87-89	83-86	80-82	77-79	73-76	60-72	0-59

"CR" means "Credit", "NC" means "No Credit".

The exam grade will be given as the percentage points of the correct answers.
The final grade for the course will be given as the total weighted score for all activities according to the percentage shown in the table below.

Activity	Time	Percent
Classroom activities	Every day	30%
Mid-term exam	In the middle of the course	35%
Final exam	In two weeks after the course	35%

If both grades for the midterm and final exams are "F" the term grade for the course is "F" regardless of the grades for other activities.

MAKE-UP WORK
Assignments are to be completed on time during the course. Late assignments will result in a reduced grade. Mid-term and final exams and group presentations cannot be made up if missed unless there is a documented emergency.

COURSE SCHEDULE

Lectures		Topic	Chapters	
#	Date		Lectures	Textbook
1	3-Feb	(a) About the Course (b) The World	Ch. 1	
2	10-Feb	Measurements	Ch. 2	Ch. 1
3	17-Feb	Motion	Ch. 3	Ch. 2
4	24-Feb	Force and Motion	Ch. 4	Ch. 3
5	3-Mar	Work and Energy	Ch. 5	Ch. 4
6	10-Mar	Temperature and Heat	Ch. 6	Ch. 5
7	17-Mar	Midterm Exam	Chs. 1-6 as in lectures	
8	24-Mar	Waves and Sound	Ch. 7	Ch. 6
9	31-Mar	Optics and Wave Effect	Ch. 8	Ch. 7
10	7-Apr	Electricity and Magnetism	Ch. 9	Ch. 8
11	14-Apr	Atomic Physics	Ch. 10	Ch. 9
12	21-Apr	Nuclear Physics	Ch. 11	Ch.10
13	28-Apr	The Solar System	Ch. 12	Ch.16
14	5-May	The Universe	Ch. 13	Ch.18
15	12-May	Comprehensive Final Exam	Ch. 1-13 as in lectures	

CHEATING AND PLAGIARISM

Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit. Acts of cheating include, but are not limited to, the following:

(a) plagiarism;
(b) copying or attempting to copy from others during an examination or on an assignment;
(c) communicating test information with another person during an examination;
(d) allowing others to do an assignment or portion of an assignment;
(e) using a commercial term paper service.

Penalties for cheating and plagiarism range from a 0 or F on an assignment, through an F for the course, to expulsion from the university. Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Dean of Students, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action.

OTHER COMMENTS

- Please participate. What you put into the class will determine what you get out of it – and what others get out of it.
- Please come on time. Late arrivals disturb everyone else.
- If you miss a class, you are responsible for getting notes/slide printouts on the material covered from a classmate or the instructor.
- To avoid distracting noise in class, cellular phones must be turned off or the ringing mode silenced.

- Questions and comments during the class are welcome. Do not hesitate to ask questions – do not leave anything unclear for you.

COURSE LEARNING OUTCOMES[1]

	Course Outcome	Program LO	Institutional LO	Assessment
1	Students are expected to demonstrate the knowledge of the basic concepts and techniques of physics and the skills in solving physics problems.	PLO 1	ILOs 1a, 2a,3a	HW, Class assignments, class activity, tests
2	Students are expected to develop logic, application and interpretation of the most fundamental physics concepts.The class does not require previous knowledge of physics but requires the knowledge of college algebra,common sense and practical logic.	PLO 2	ILO 1a and 6a HW, Class assignments, class participation, tests	HW, Class assignments, class activity, tests
	Confidently communicate using physics symbols and terminology.	PLO 3		HW, Class assignments, class activity, tests.
	Be able to choose an appropriate physicsanalysis for the type of data they plan to analyze, select an appropriate model, conduct and interpret the analysis, and write down the results	PLO 4	ILO1a, 2a, 5a	HW, Class assignments, class activity, tests

MODIFICATION OF THE SYLLABUS

The instructor reserves the right to modify this syllabus at any time during the semester. Announcements of any changes will be made in a classroom.

[1] Detailed description of learning outcomes and information about the assessment procedure are available at the Center for Teaching and Learning website (ctl.lincolnuca.edu).