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Fall 2015

## PHYS 6194

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*University of New Orleans*

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## PHYSICS 6194 – section 002, Selected Topics in Physics: *Band Theory and Electronic Properties of Solids*, Fall 2015

**Course description:** This individual study course will cover the important topic of band theory and electronic properties of materials. The course objective is to reveal how band theory leads to everyday properties of materials around us. In addition the course will introduce concepts, ideas and vocabulary necessary for the understanding of electronic, magnetism optical and structural properties of the materials met in science and technology.

**Prerequisites:** Credit in *Advanced Electricity & Magnetism* (PHYS4501 or PHYS6501) and *Quantum Mechanics* (PHYS 4401 or PHYS6401) or equivalent.

**Lecture:** individual study

**Instructor** Dr. Leonard Spinu

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**Phone:** 280-3218

**E-mail:** LSpinu@uno.edu

**Text:** *Band Theory and Electronic Properties of Solids* by John Singleton.

**Exams:** There will be one midterm exam along with a comprehensive final exam. The exam will contain both conceptual questions and quantitative problems. The problems will be comparable to questions and problems found in the required textbook.

**Homework:** Homework assignments will be given on a weekly basis.. Solutions to the homework problems will be posted on the Web (Moodle) after each assignment is due. Accordingly, **late homework will not be accepted**

<b>Grading</b>		<b>Grading Scale</b> ( <i>subject to change</i> )
Homework	50%	A 89 – 100 %
Test I	15%	B 77 – 88
Final	35%	C 65 – 76
		D 53 – 64
		F <53

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