

## Physics 554 QUANTUM MECHANICS 1 Fall 2008 Schedule

MO.	DATE	DAY	TOPIC	Chap/Sec	Homework
Aug.	21	Th	Continuity, Schrödinger Eq.	5.3	
	26	T	Free particle: Propagator, Uncertainty, wavepackets	1,9	
	28	Th	One-D problems	5,7	
Sept.	2	T	One-D problems	5,7	
	4	Th	One-D problems	5,7	
	9	T	One-D problems	5,7	
	14	Th	QUIZ #1		
	16	T	3D Bound states, Angular Mom.	12,13	
	21	Th	3D Bound states, “	12,13	
	23	T	3D Bound states, “	12,13	
	28	Th	3D Bound states, “	12,13	
	30	T	3D Bound states, “	12,13	
Oct.	2	Th	QUIZ #2		
	7	T	Spin from continuity	none	
	9	Th	Spin from rotating particle	14	
	14	T	Spin + H atom, HO	14	
	16	Th	Spin + H atom, HO	14	
	21	T	Many particles from continuity	none	
	23	Th	Many particles	10	
	28	T	Many particles	10	
	30	Th	Many particles	10, 15	
Nov.	4	T	Many particles	10. 15	
	6	Th	QUIZ #3		
	11	T	To be chosen		
	13	Th	To be chosen		
	18	T	To be chosen		
	20	Th	To be chosen		
Thanksgiving Break					
Dec.	2	T	Review		
	4	Th	Review		
	8 - 12		Final Exam Week		

# Syllabus, Physics 554, Quantum Mechanics I, Fall 2008

T, Th 10:20 – 11:35 OH 247

**Instructor:** Prof. G. H. Goedecke, ggoedeck@nmsu.edu  
Office: Regents Row 408, 646-1926  
Other telephone: 522-0323 after 7:30am, before 10pm  
Office hours: \_\_\_\_\_

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**Text:** R. Shankar, *Principles of Quantum Mechanics*, 2<sup>nd</sup> ed. (Springer, 1994)  
ISBN 978-0-306-44790-7 ; QC 174.12.S52

**Supplementary Text:** R. Liboff, *Introductory Quantum Mechanics*,  
2<sup>nd</sup> ed. (Addison-Wesley, 1992), ISBN 0-201-54715-5 ; QC 174.12.L52

**Other references:** J.J. Sakurai, *Modern Quantum Mechanics* and *Advanced Quantum Mechanics*.

**Description:** PHYS 554 is the first semester of the graduate core sequence 554/555 on quantum mechanics. Some topics to be covered during this Fall 2008 semester are listed in the schedule. We will not follow the order in the textbook. Some supplementary notes will be provided.

**Grading:** Your final grade will be determined by your performance on three in-class exams (15% each), a final in-class exam (30%), and homework (25%). Perhaps some or all of the in-class exams will also be assigned as homework. Also, homework will include at least one “research paper” on a topic of special interest to you, which may be presented in class.

If you have an excusable conflict with a homework assignment or test, please inform me as soon as possible so that we can make arrangements. If you wish to meet with me outside of class, please visit me during my office hours, or drop by at some other time. We can also make an appointment. If you disagree with a grade received, or believe that an absence should be excused, please report this matter immediately. You must present your reasons for disagreement with grading within one week of your receipt of the graded material, along with a copy of any paper in question.

## **Student Conduct:**

- Turn off cell phones and pagers while in class.
- Do not cheat on exams or homework. If you do you will receive a failing grade for the class. If you copy another student’s homework, both will receive a failing grade for the class.

For more information, see [http://www.nmsu.edu/~vpss/SCOC/student\\_hand\\_book.html](http://www.nmsu.edu/~vpss/SCOC/student_hand_book.html)

**Students with Disabilities:** If you have or believe you have a disability, you may wish to self-identify. You can do so by providing documentation to the Office for Services for Students with Disabilities, Corbett Center (phone: 646-6840). Appropriate accommodations may then be provided for you. If you have a condition which may affect your ability to exit safely from the premises in an emergency or which may cause an emergency during class, you are encouraged to discuss this in confidence with the instructor and/or the coordinator of the Office for Services for Students with Disabilities. If you have general questions about the Americans with Disabilities Act (ADA), call the ADA Coordinator at 646-3635.