**Syllabus**

Course: Physics 342/555, Spring 2004  
Instructor: Dr. Pengcheng Dai,  
Room 407A, ext. 4-1509 or 574-5233, e-mail: daip@ornl.gov  
Office hours: T. R. 1:10-2:00 pm

<table>
<thead>
<tr>
<th>Date</th>
<th>Chapter (Sections)</th>
<th>Homework problems will be assigned each week</th>
</tr>
</thead>
</table>
| Jan. 13, 15| Chapters 1, 2     | Chapter 1, problems 1, 2  
Chapter 2, problems 1, 2  
Homework due Jan. 22nd, 2004 |
| Jan. 20, 22| Chapters 2, 3     | Chapter 2, problems 4,6,7  
Chapter 3, problems 2,4,5  
Homework due Jan 29th, 2004 |
| Jan. 27, 29| Chapter 4         | Chapter 4, problems 1,2,4,6  
Chapter 5, 1,4,  
Homework due Feb. 5th |
| Feb. 3, 5  | Chapter 5. Chapter 6 | Chapter 5, problem 3  
Chapter 6, problems 1, 2, 5  
Homework due Feb. 12 |
| Feb. 10, 12| Chapter 6, 1st exam | First example will cover materials from Jan 13 till Feb. 5th |
| Feb. 19, 20| No class Feb. 17, class Feb 19 regular time and Feb. 27,11:00 AM in room 304 | Chapter 6, problems 6,10  
Homework due Feb 26th |
| Feb. 24, 26| Chapter 8         | Chapter 7 problems 1, 2, 3  
Homework due March 9th. |
| March 2, 4 | Chapter 9         |                                                                                                           |
| March. 16, 18| Chapter 9       | Chapter 7 problems 6, Chapter 8, problems 1, 2, 4  
Homework due April 8th. |
| No class March 23, second exam March 25 | 2nd exam on March 25 |                                                                                                           |
| March 30, April 1| Chapter 10   |                                                                                                           |
| April 6, 8  | Chapter 12        | Chapter 9, problems 2, 3, 7,  
Chapter 10, problems 1, 9  
Homework due April 20th, 2004 |
| April 13, 15| Chapter 13        |                                                                                                           |
| April 20, 22| Chapter 14        | Chapter 12, problem 3  
Chapter 14, problem 1  
Homework due April 29th, 2004 |
| April 27,  | Chapter 15        |                                                                                                           |
| May 4      | Final exam        | 12:30 PM-02:30 PM (confirmed)                                                                                   |
Class attendance is expected. You are responsible for the material that will be covered in
class and for all the homework problems assigned each week. The assigned homework will
be graded each week. The home work needs to be done independently, and all home works
have assigned deadlines. Please provide your e-mail address so class announcements will be
sent to you electronically.

You will have at least one week of time to do the homework. Study by consulting first your
class notes and then finding the appropriate material in your textbook. Study carefully the
problems that are worked out in your textbook.

There will be three closed book exams; the first two will contribute 20% each. The final
exam will be comprehensive and it will carry 40% of the total weight. We have some
flexibility in scheduling these mid-term exams so there will be no makeup exams.

The home work assigned each week will take 20% of the total weight in the final grade.

A CALCULATOR is required.

Talking or disturbing the class in any other way will not be tolerated.

Come and talk to me about any concerns you might have regarding this course.

For each exam, you will be given a formula sheet for any equations that will be used. You
can use your calculator, but no other materials are allowed in the exams.

The textbooks for this class include:
1. 7th edition “Introduction to solid state physics” by Charles Kittel
2. “Inorganic structural chemistry” by Ulrich Muller, will be available after Jan 20, 2004
   at the UT bookstore. See also: