Physics 467: Quantum Statistical Mechanics FS 2002

Instructor:	Thomas Vojta Office: 123 Physics, phone: 341-4793, email: vojtat@umr.edu
Office hours:	Drop in any time, or if you want to make sure I am available, email me for an appointment.
Course home page:	http://www.umr.edu/∼vojtat/class_467/class_467.html
Class time:	3:30 pm – 4:45 pm MW, Room 127 Physics Building
Prerequisites:	Statistical Mechanics (Phys 413), Quantum Mechanics II (Phys 463)
Recommended text:	J. W. Negele and H. Orland, *Quantum Many-Particle Systems* The course will not always follow this book. Class attendance is crucial.
Further reading:	A.A. Abrikosov, L.P. Gorkov, and I.E. Dzyaloshinski, *Methods of Quantum Field Theory in Statistical Physics* (The classic in the field, contains lots of material but is hard to read) L. D. Landau and E. M. Lifshitz, *Statistical Physics II* (Classic text, somewhat hard to read but easier than Abrikosov et al.) G. Mahan, *Many-Particle Physics* (Good book with many examples, not always accurate, somewhat epic)
Homework:	Weekly homework will be assigned in class on Wednesday and also posted on the Web. Assignments are due in class the following Wednesday. Solutions will be posted on the Web on Thursdays. Each assignment will be worth 20 – 30 points. A total of 300 points may be earned from the homework although more than 300 points of homework will be assigned. This allows you to miss one or two problems without penalty. General discussions among colleagues is encouraged. However, the solutions you hand in should represent your effort and not that of a group. You should document the intermediate steps of your solution (partial credit will be given) and list any reference which you directly use.
Tests:	There will be a midsemester test counting 200 points and a comprehensive final exam also counting 200 points. The midsemester test will be given in the week of October 21.
Grade:	Course grade will be based on the total number of points earned on the homework, test and exams, expressed as a percentage of the total number of points available (700). The relation between performance and grade will be the standard one: $A \geq 90\% > B \geq 80\% > C \geq 70\%$. The boundaries between the grades may be revised downwards (i.e., to the students benefit) depending upon the judgement of the instructor, but will not be revised upwards.
Contact information:	This course is offered by the UMR Department of Physics, chaired by Dr. Paul E. Parris (parris@umr.edu, 4790), under the auspices of the College of Arts and Sciences (Dean Dr. Paula M. Lutz, plutz@umr.edu, 4131).