

Course Outline

Course: Phys 731 Quantum Field Theory,I Section I

Instructor: Dr Alakabha Datta

Office: 209 Lewis Hall

Meeting: T-Th 11-12.15 pm at Lewis 104

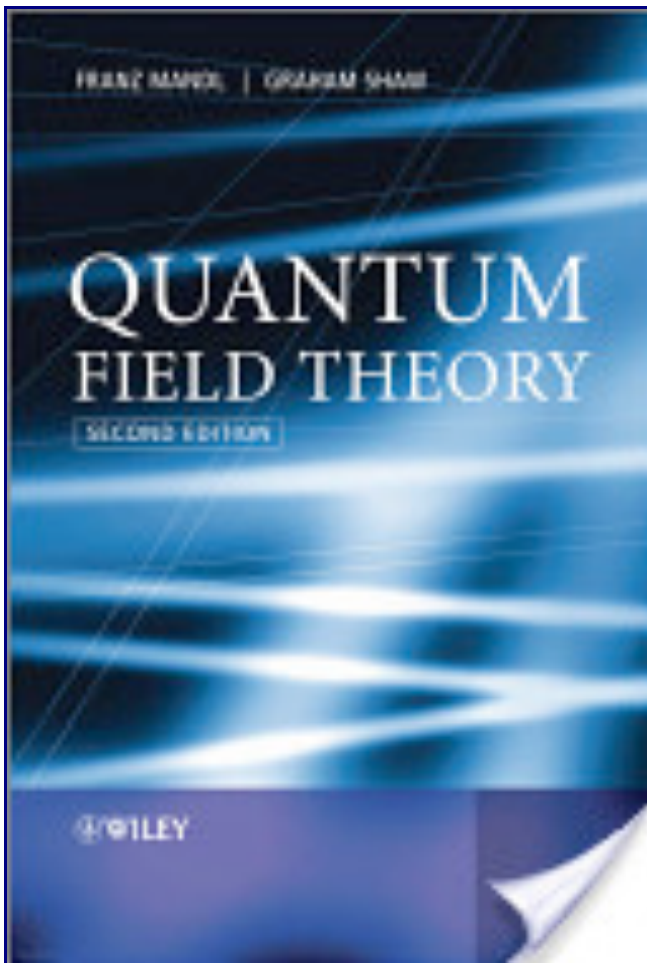
Office Hours: By Appointment

Email: datta@olemiss.edu, datta@phy.olemiss.edu

Phone: (662) 915-5611

Course homepage: Check Blackboard.

Book



[Franz Mandl](#), [Graham Shaw](#)

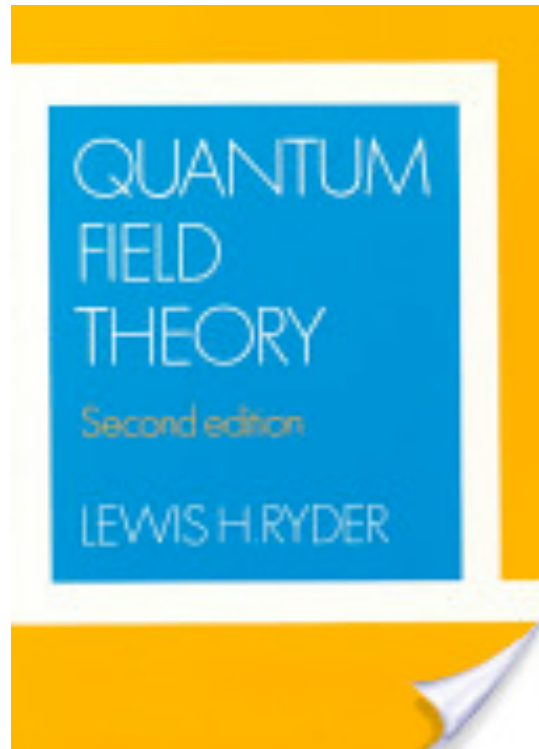
Recommended Books:

Introduction to quantum field theory



[Michael Edward Peskin](#), [Daniel V. Schroeder](#)

Quantum field theory



[Lewis H. Ryder](#)

Others: Quantum Field Theory by Roman, Bailin and Love, Bjorken and Drell, P. Ramond, Paul H. Frampton, C. Itzykson and J-B Zuber etc

Course Goals: Learning to apply the basic postulates and rules of Quantum Field Theory and application to various processes including Quantum Electrodynamics

Independent study: Every student will be asked to prepare a talk on some given topic related to QFT

Marking:

Homework: 50 %

Talk: 25%

Final Exam: 25% (Take home)

Final Exam: Tuesday Dec 6, noon

An overall course average of the following percentages will guarantee the corresponding letter grade:

90%	A
80%	B
70%	C
60%	D

Topics Covered in course: Topics will be taken from chapters 1-9 in the book. Topics include quantization of the scalar, spinor and vector field, Feynman graphs, tree and loop level processes in Q.E.D.

Attendance: There is no attendance requirement. However if you miss an exam or cannot turn in HW on time because of illness I will require a doctor's note. If you will away on other reasons inform me prior to your absence and get a note if applicable.

Academic Integrity: We will follow the University's policy of academic integrity (M-book). Violations of these policies will result in a failing grade and other disciplinary actions. In particular you are not allowed the use of the Instructor's Solution Manual.