5/03/2004

Recommended First-year Graduate Courses in Physics

Grad Studies Committee – Spring 2004

(arranged according to the research interests of a student)

	CM Expt	CM Thy	Part/Nuc Expt	Part/Nuc Thy	Biophysics	Astro	Quant. Optics
Fall	MMA	MMA	MMA	MMA	MMA	MMA	MMA
	580	580	580	580	580	580	580
	504	504	405/570/504	504	504	504/AST	504
Spring	505	505	505	505	505	505	505
	581	581	581	581	581	581	581
	560/ESM/MMB	MMB	504/MMB/BR	MMB	MMB/500-501	MMB	BR/MMB

Comments:

1) Rationale: There are core courses that everyone should take; you need not specialize in your first year. However, if you are pretty sure of your research interests, it is beneficial to have taken a course in that field (possibly undergraduate level) prior to your first summer with a research group.
2) Students who have taken equivalent graduate courses previously should begin at an appropriate level (e.g., Quantum Field Theory 582/583 follows 580/581).
3) The recommended schedule assumes that as an undergraduate you have taken a year of junior-senior-level Quantum Mechanics, Electricity and Magnetism, and Classical Mechanics, and a semester of Thermodynamics/Statistical Mechanics. Incoming students who are not prepared for graduate-level courses such as 580, 504, or 505 may start with an appropriate undergraduate course such as 487, 427, or 436.
4) Some courses are offered every semester (e.g., 505, 504, 580, 581). Most courses are offered every other semester (500-501, 550, 570, 560, ESM, MMA, MMB).

Nomenclature:

MMA/MMB	Math Methods
505	Classical Electromagnetism
570	Subatomic Physics
580	Quantum Mechanics I
581	Quantum Mechanics II
504	Statistical Physics
560	Condensed Matter Physics I
405	Electronic Circuits II
ESM	598ESM – Emerging States of Matter (alternative Breadth course to 560)
AST	598AST – Introduction to Astrophysics
500	Advanced Mechanics (1^{st} half semester)
501	Continuum Mechanics (2^{nd} half semester)
BR	Breadth Requirement (formerly known as Cafeteria Courses)