**DEPARTMENT OF PHYSICS**
**UNIVERSITY OF MARYLAND**
**COLLEGE PARK, MARYLAND**

**Phys604/F12/Hassam/General Information**

Instructor: Professor Adil Hassam
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Office Hours: Random Access, or by appointment. Email is most efficient for quick questions.

Spacetime: **TuTh..... 9:30am-10:45am (CHM 0127)**

TA: Sung Woo Hong, sungwoo83hong@gmail.com
Mon 430-530pm, Fri 2-3pm, Room Phys 3101

Text: Arfken, Weber, Harris ($7^{th}$ Ed) - Mathematical Methods for Physicists

Recommended Text: Byron and Fuller - Mathematics of Classical and Quantum Physics

References: Mathews and Walker (brief, good for quick survey and quick application)
Bender and Orszag (excellent text for asymptotic methods)
Abramowitz and Stegun (Handbook for special functions)
Morse and Feshbach (classic reference, detailed descriptions)
Churchill (complex variables)

Content: Selected material from Chapters 6-10, 11-15, 18-21 from Arfken et al will be covered. The main topics will be complex analysis, ordinary differential equations. Sturm-Liouville Theory, special functions, partial differential equations, initial and boundary value problems. Asymptotic methods will be introduced. The PDE portion is geared toward the math in Chs. 1-5 of Jackson (606).

Homework: Weekly problem sets, graded.

Exams: Two Midterms and a Final (tentative).

Grading: Problem Sets - 20%, Midterms - 35%, Final - 45%.