REFERENCES TEXTS FOR MATH 402/403


7. Mathews, Jon and Walker, R.L. "Mathematical Methods of Physics" W.A. Benjamin, Inc., N.Y., 1970 This book treats a broad range of advanced topics: ordinary differential equations; infinite series, evaluation of integrals, integral transforms; complex variables, vectors and matrices, special functions; partial differential equations; eigenfunctions, eigenvalues, Green's function perturbation theory, integral equations; calculus of variations probability and statistics, tensor analysis; group theory. This book covers these subjects with very few details. It was meant as an outline for students to follow in pursuing these topics on their own.

8. Morse, Philip M. and Feshbach, Herman "Methods of Theoretical Physics" Mc-Graw Hill, N.Y., 1953, Volumes I and II Good reference book; some material for course will be taken from these books - but not enough to warrant buying either volume.

9. Korn, Granino A. and Korn, Theresa M. "Mathematical Handbook for Scientists and Engineers" Contains an excellent, concise, and detailed summary of just about any mathematical topic you are likely to encounter in classwork or research. This is a very good reference book! Consider buying this book for your library (not required or advised for this course specifically).


12. Bergman, Peter Gabriel "Introduction to the Theory of Relativity" Dover, New York 1976. Chapter V has a very good (and complete) discussion of Vector and Tensor Calculus...you should find this useful.


14. Lovelock, David and Rund, Hanno "Tensors, Differential Forms and Variational Principles".


16. Spain, B. and Smith, M.G. "Functions of Mathematical Physics" Van Nostrand Reinhold Company, New York, 1970. This is a good reference for Chapter V of class notes: Differential Eqs. This book takes a little different approach to special functions, but you will find it complements material in notes.

17. Andrews, Larry C. "Special Function for Engineers and Applied Mathematicians" Macmillan, New York, 1985 Has nice discussion of special functions including the Digamma function, Beta function, fractional derivatives, Gegenbauer polynomials, Jacobi polynomials, incomplete gamma function, Packhammer symbol,........