PHYS 6124 Mathematical Methods of Physics I Prof. P. Cvitanović Handout 3 ChaosBook.org/~predrag/courses/PHYS-6124-20 School of Physics 18 August 2020 PREREQUISITES Georgia Tech

In order to take this course you ought to be acquainted with the following topics:

- Calculus of several variables:
- Vector analysis, especially div, grad and curl, including their use in curvilinear coordinate systems; Stokes's theorem and Gauss's theorem (i.e., the divergence theorem);
- Elementary ordinary differential equations;
- Fourier series;
- Integral transforms (e.g., Fourier, Laplace);
- Systems of simultaneous linear algebraic equations; properties of matrices and their determinants; and
- Elementary aspects of complex variables.

Do not panic if you consider your preparation to be inadequate! Give yourself a while to assess the situation, and talk to me if you are seriously concerned.