University mathematicians often have opportunities to consider academic positions in universities of developing nations. Such opportunities can be personally stimulating and rewarding, but inevitably carry with them a variety of uncertainties. This presentation examines various aspects of teaching mathematics at and chairing a department in such a university. While the presentation centers on the author’s nine years of experience at the University of Papua New Guinea, it also incorporates experiences of mathematicians who have had positions in other nations. Among the teaching aspects discussed are language and cultural issues, the varying mathematical backgrounds of students, means of encouraging able students, and working in a different academic environment. Issues of chairing a department that are considered include adapting to a different academic system, working with national administrators and staff, developing an appropriate curriculum, enabling national staff development, recruiting staff, operating with limited infrastructure, and developing computing facilities. The presentation also addresses personal issues, the rewards stemming from such a position, and methods for locating positions in the universities of developing nations. (Received July 27, 2000)