There is growing evidence that teacher education and development in Africa presents one of the greatest challenges both to governments and teacher education institutions. In the Kenyan context, the quality of education is heavily dependent on the quality of staff, their motivation and the leadership they experience. The quality of teaching depends on the quality of the teachers, which in turn depends to some extent on the quality of their professional development. The Kenyan Government, in an attempt to ensure quality teaching in schools, has invested substantial amounts of financial and human resources directed toward in-service training programs for teachers. The purpose of the study was to investigate the factors that influence in-service training of secondary school teachers in Mwingi District. The study was carried out in Mwingi District of Eastern Province, Kenya focusing on public secondary school teachers serving in this district. A total of 130 teachers and 26 headteachers were selected from 26 of the 45 public secondary schools in Mwingi District to participate in the study. The study employed a questionnaire for data collection. Descriptive statistics, including frequency counts and percentages, were used to analyze the existing in-service training programs. Results of the study were presented using frequency tables, bar graphs and pie charts. The study established that 83.1% of the teachers had received in-service training, while 16.9% of them had not. Teachers had attended various in-service courses, including subject-based training course like SMASSE, guidance and counselling courses, education management and practice courses, human and public relations courses, legal aspects of school management, leadership in education, curriculum implementation, financial management and control and HIV/AIDS management courses. The teachers were influenced to enroll for in-service training by needs of the schools they were working in, the need to get better qualified, their own needs to develop advance in career, chances for better payment, headteachers' suggestions, and Ministry of Education requirement. The study concludes that if in-service course organizers could conduct nationwide training needs analysis for teachers, and organize their programmes based on findings of such analysis, then the programmes would realize far more positive results than already on the ground.