

## **MA374 Asymptotic Analysis (Zhiyuan College)**

Instructor: Li Jinglai, 628 Pao Yue-Kong Library.

Email: [ljl\\_teaching@126.com](mailto:ljl_teaching@126.com)

Office Hour: tba

Textbook: J.D. Murray, *Asymptotic Analysis*, Springer-Verlag (1984)

Topics (tentative): asymptotic expansions, method of steepest descent, method of stationary phase, asymptotic evaluation of Fourier and Laplace transforms, WKB method, turning points, singular perturbations, method of multiple scales, matched asymptotic expansions, boundary layers, optional topics if time permits.

Grading policy: midterm exam 30%, final 50%, HW & quizzes 20%.