SF2521: Homework Assignment 3

Thomas Garrett & Weicker David

6$^{\text{th}}$ November 2015

1 Well–posedness and von Neumann analysis

In this section, we consider the 2π-periodic Cauchy problems

$$u_t = \alpha u_{xx} + \beta u_{xxxx}$$
$$u(x,0) = sin(x)$$

1.1 Well-posed for $\alpha > 0$ and $\beta = 0$