

Course 2E02 2013 (SF Engineers & MSISS & MEMS)**S h e e t 9**

Due: at the end of the tutorial

Exercise 1

Identify even or odd functions and find their Fourier series for $-\pi \leq x \leq \pi$:

- (i) $f(x) = -x^2$;
- (ii) $f(x) = x$.

Exercise 2

Find the Fourier integral representation of the function

$$f(x) = \begin{cases} 0 & \text{if } |x| > 1 \\ x & \text{if } |x| < 1. \end{cases}$$