PHY1106: Waves and Oscillators	Dr. Pete Vukusic

Lecture 1.

Lecture objectives.

- To be familiar with the topics within the first half of module.
- To understand the concept of SHM (undamped).
- To understand the derivation of the SHM equation of motion and the units of each of the terms involved.
- To understand the derivation of a complete solution to the SHM equation of motion.

Post-lecture tasks.

- Revise the concept of Hooke's Law. (*Young*, Ch.6). Consider the k-constant of springs in series and in parallel.
- Review the basic concepts of periodic motion, and be completely familiar with; *amplitude, period, frequency* and *angular frequency, displacement, velocity, acceleration.* (*Young*, Ch.13).
- Revise and learn basic trigonometric relations; e.g. $\sin(A+B) =$ **…….** (*Young*, Appendix B).
- Read the "**circle of reference**" section (*Young*, 13-4, Ch. 13).