BOSTON UNIVERSITY

COLLEGE OF ENGINEERING

ME306 INTRODUCTION TO MATERIALS SCIENCE

**LAB No. 2 X-Ray Diffraction PRE LAB**

[Version Spring 2014]

1. What is an X-Ray? Describe the phenomena of X-Ray Diffraction (XRD).

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2. Draw a ray diagram to illustrate Bragg’s law. Explain how Bragg’s law may be used to identify materials using XRD.

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3. Draw a Hexagonal close-packed unit cell. Label the lattice parameters. What is the relation between the lattice parameters?

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4. Lab 2 will be completed as a worksheet during your laboratory session.

Bring with you:

❒ Lab 1 Report

❒ GTF Signed Lab 1 Pre-Lab

❒ Data sheet from Lab 1

❒ Lab 2 Pre-Lab

❒ A calculator capable of calculating Sine functions