

## **Metrology Education for Engineers – II**

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### **Abstract**

Higher quality of products and services requires tighter tolerances, which necessitates improved measurement methods. This is how the science and art of measurement, namely metrology, impacts our daily lives. It's therefore more important than ever that our universities realize that their graduating engineers be equipped with necessary knowledge of metrology in addition to their major subjects. In part-one of this paper, presented at the 2005 NCSLI Annual Workshop and Symposium, two senior-level multidisciplinary elective courses were proposed: the first course, referred to as Metrology-I (Measurement Science), concentrates on teaching generic methodology to set-up and design simple measurement systems; and the second course, Metrology-II (Measurement Technology), concentrates on teaching formal knowledge of basic techniques of measurements in areas such as electrical, mechanical, electronics, optics, radiation etc. The Part one provided course outline for lecture and laboratory/tutorial sessions along with the suggested textbook for a 15-week semester for the first course. This paper presents details of the second proposed course. The method of presentation is again three 50-minutes lectures per week and an additional three-hour per week laboratory/tutorial session constituting four semester credits. The author believes that by introducing these two courses in their curricula, our universities would be able to field engineers who can set up good, traceable measurements, gather reliable measurement data, and use it in the applications and advancement of newer technologies.