

*Web-based Course on:*

## **"NANOTECHNOLOGY AND NANOSENSORS"**

Prof. Haick Hossam (Technion – IIT) has designed, developed, and will deliver a massive open online course (MOOC) on "Nanotechnology and Nanosensors ."

MOOC is a web-based course designed to support a large number of participants. MOOCs are online distance education, providing free and accessible high-quality education to the masses. Contrary to traditional courses, MOOCs allow open and free registration to any non-credit participants. Any background in science (chemistry, biology, physics), technology and/or engineering would fit the course.

The "Nanotechnology and Nanosensors" MOOC includes ten classes of 3-4 short lecture videos. The MOOC course is available for free to anybody who is interested in extending his knowledge. A certificate will be provided for successful participants at the end of the course.

**For more details on the course and for registration, please visit:**

**[www.coursera.org/technion](http://www.coursera.org/technion)**

### **BRIEF DESCRIPTION OF THE COURSE:**

Nanotechnology and Nanosensors is a course for people who are interested in learning about novel sensing tools that makes use of nanotechnology (a technology that relies in the regime between one to hundred nanometers, viz. billionths of the meter) to screen, detect, and monitor various events in either our personal or professional life. The students discover the fascinating world of nanoland that bumps up against the basic building blocks of matter. As such, the students discover how holding the nanoland with various sensing devices together could lay the groundwork for infinite innovative applications in every part of our daily life, starting from in-vivo and ex-vivo diagnosis and treatments of diseases, continuing with quality control of goods and environmental aspects, and ending with monitoring security issues. In this endeavor, the students learn how to fabricate such new tools, how to characterize them, how to control them, and how to integrate them in the various applications.