# International Affiliated Double-Degree Program Summer School 2008

The Center for International Cooperation in Engineering Education (CICEE) at The University of Tokushima is pleased to announce that it will be hosting a summer school program for engineering graduate students who are studying at The University of Tokushima or its partner institutions. This program offers the following two courses: Nano-technology Engineering and Bio-information Engineering. Students may take only one of these two courses. All courses are offered in English by faculty members from The University of Tokushima.

# Period: From Mon., August 4 to Fri., August 8, 2008 Place: The University of Tokushima

#### **Registration:**

Students are required to submit a registration form to the CICEE Office by e-mail, fax or post prior to the program by no later than Friday, June 20, 2008. No fee is required for the registration; but students are responsible for their travel expenses to The University of Tokushima and any other living expenses while staying in Tokushima.

# **Course Descriptions:**

## Nano-technology Engineering Course

This course will cover the following three topics.

- 1. Fundamentals of transmission electron microscopy, X-ray absorption spectroscopy, and other techniques, which are essential to materials science.
- 2. Advanced materials, which could make our lives better in the near future, such as hydrogen-separating Pd menbrane and transparent conducting oxides.
- 3. The latest laser nanoscience; surface modification by means of laser irradiation and nanoparticle fabrication by pulsed-laser ablation technique.

## Bio-information Engineering Course: Applied Engineering of Electronic Circuits

This course discusses recent technologies involving electronic circuits and their applications.

- 1. Oscillator design methods using nonlinear theory
- 2. Nonlinear phenomena in coupled oscillators and their analysis
- 3. Basic technologies for semiconductor monolithic integrated circuit
- 4. Video coding algorithm and its VLSI implementation
- 5. Current test technology for obtaining high reliability in VLSIs
- 6. Analysis of biological signals using neural networks