

International Affiliated Double-Degree Program

Summer School

July 21–August 15, 2014

Center for International Cooperation in Engineering Education
Graduate School of Advanced Technology and Science
The University of Tokushima
Tokushima, Japan

Sponsors

- ✧ Center for International Cooperation in Engineering Education (CICEE), The University of Tokushima.
- ✧ The University of Tokushima.
- ✧ International Center, The University of Tokushima.
- ✧ FD Committee, Faculty of Engineering, The University of Tokushima.
- ✧ Faculty of Integrated Arts and Science, The University of Tokushima.
- ✧ Center for General Education, The University of Tokushima.

Contents

Course Details

- (i) Nanotechnology and Materials Science Course
- (ii) Electrical Engineering and Information Science Course

General Information

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: Nanotechnology and Materials Science, Electrical Engineering and Information Science. Students may enroll in only one of the two courses. All courses are offered in English by both guest lecturers and faculty members of 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, no later than Thursday, May 31, 2014. **The Registration fee is 3000 Yen.** This registration fee includes the accommodation charges and meal for the field trip at Kamikatsu town. However, participants are responsible for their local travel expenses and any other living expenses while in Tokushima.

Schedule

Each course has its own schedule for most of the period of the Summer School. Additionally, here is the common schedule for all participants.

(i) Registration :

Date and Time: Monday, July 21, 17:00 to 18:00

Registration begins at 17:00 Please be prompt.

Place: Memorial Hall, Second Floor, Alumni Building, Josanjima campus.

(ii) Opening Ceremony

Date and Time: Tuesday, July 22, 10:30 to 11:00

Place: Memorial Hall, Second Floor, Alumni Building, Josanjima campus.

Opening Remarks:

1. Prof. Yasuhiko Kawamura (Dean of Engineering, The University of Tokushima, Japan)
2. Prof. Toshihiro Moriga (Director, CICEE, The University of Tokushima, Japan)

(iii) Orientation and Common Activities

1. Common Lecture 1

Date and Time: Tuesday, July 22, 11:00-12:00.

Place: Memorial Hall, Second Floor, Alumni Building, Josanjima campus

Speaker: **Dr. Pankaj Koinkar** (The University of Tokushima)

Title: "Summer School Orientation: Program and Information"

2. Common Lecture 2

Date and Time: Tuesday, July 22, 13:30-14:30.

Place: Memorial Hall, Second Floor, Alumni Building, Josanjima campus

Speaker: **Dr. Satoshi Hashimoto** (The University of Tokushima)

Title: "Basic Japanese for Communication"

3. Common Lecture 3

Date and Time: Wednesday, July 23, 10:30-12:00.

Place: Memorial Hall, Second Floor, Alumni Building, Josanjima campus

Speaker: **Prof. Michihiro Nakamura** (The University of Tokushima)

Title: "Multifunctionalized Organosilica Nanoparticles for Biomedical Applications"

4. Common Lecture 4

Date and Time: Thursday, July 24, 10:30-12:00.

Place: Memorial Hall, Second Floor, Alumni Building, Josanjima campus

Speaker: **Prof. Hajime Miura** (The University of Tokushima)

Title: "Exercise is medicine for your healthy aging"

5. Common Lecture 5

Date and Time: Friday, July 25, 10:30-12:00.

Place: Memorial Hall, Second Floor, Alumni Building, Josanjima campus

Speaker: **Prof. Hiroshi Takubo** (The University of Tokushima)

Title: "The English Language in a Globalized World"

(iii) Intercultural Meeting

Date and Time: Monday, August 4, 18:30 – 20:30

Place: University Cafeteria, Josanjima campus

(iv) Field Trip at Otsuka Pharmaceutical Company, Itano, Tokushima city

Meeting Place: In front of the Electrical and Electronic Engineering building

Date and Time: Thursday, July 31, 12:15

Schedule:

- 12:30 Departure from The University of Tokushima
- 13:30 Arrival at Otsuka Pharmaceutical Company
- 14:00 Visit to Medical Division
- 15:00 Visit to Food Division
- 16:00 Departure from Otsuka Pharmaceutical Company
- 17:00 Arrival at The University of Tokushima

(v) Field Trip at Kagawa University, Takamatsu City

Meeting Place: In front of the Electrical and Electronic Engineering building

Date and Time: Wednesday, August 6, 8:45

Schedule:

- 9:00 Departure from The University of Tokushima
- 10:30 Arrival at Tsuda no Matsubara (Kinrin Park)

- 12:00 Departure from Tsuda no Matsubara (Kinrin Park)
- 12:30 Arrival at Kagawa University
- 13:00 Lectures on Disaster management and Earthquake simulation
- 16:30 experience
- Departure from Kagawa University
- 18:00 Arrival at The University of Tokushima

(vi) Field Trip at Kamikatsu town, Tokushima city (August 7-8)

Meeting Place: In front of the Electrical and Electronic Engineering building

Date and Time: Thursday, August 7, 7:45

Day 1: Japanese cultural experience

Schedule:

- 8:00 Departure from The University of Tokushima
- 9:00 Arrival at Maruki Farm in Kamikatsu town
- 10:30 Visit to Tea shop, Kurukuru recycle shop
- 11:30 Lunch
- 12:30 Arrival at Yamo no Gakko (Mountain School)
- 13:30 Orientation, Stage Construction and Theater Group Practice
- 15:00 Group performance by Kome Kome Girls
- 19:00 Cross Cultural meeting

Day 2: Internship and Business experience

Schedule

- 7:30 Orientation on venture Business
- 8:00 Departure from Mountain school.
- Irodori leaf Internship, venture business experience on
- Tea leaf harvesting, Forestation, Wooden Craft, Bush cutting
- 16:00 Arrival at Mountain school
- 16:30 Closing ceremony
- 17:00 Departure from Mountain School
- 18:30 Arrival at Tokushima

Schedule: *Summer School* 2014

| Timing | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|-------------|--|--|--|---|---|-----------------------------------|-----------------|
| 10:30-12:00 | ②① | ②② Opening Ceremony (Yasuhiko Kawamura) (Toshihiro Moriga) - Orientation (Koinkar) | ②③ Common Lectures - Bio-medical (Nakamura) | ②④ Common Lecture - Japanese Culture (Miura) | ②⑤ Common Lecture - Japanese Culture (Takubo) | ②⑥ Yoshino-Gawa Festival | ②⑦ Free Time |
| 13:00-17:00 | Registration | Common Lectures - Japanese Language (Hashimoto) - Heterostructures (More) - Business (Chen) | - Electronic Devices (Shirsat) | - Biometrics (Karungaru) - Nanomaterials (Koinkar) - World of Nano (Murakami) | - Nanocomposites (Chiu) - Nanotechnology (Murakami) - Biomedical (Lee) | | |
| 10:30-12:00 | ②⑧ Special Lecture | ②⑨ Special Lecture | ③⑩ Special Lecture | ③① Field Trip 1 Otsuka Pharmaceuticals Company (Food & Medical Divisions) | ① Special Lecture | ② Climbing - Bizan Mountain | ③ Free Time |
| 13:00-16:30 | Special Lecture | Special Lecture | Special Lecture | | Special Lecture | | |
| 9:00-17:00 | ④ Group Discussions - between Japanese and foreign students on Food, Agriculture | ⑤ Group Discussions - between Japanese and foreign students on Education and Local community | ⑥ Field Trip 2 Kagawa University - Disaster Management - Earthquake Simulation | ⑦ Field Trip 3 Kamikatsu Town - Farm - Orientation - Group performance | ⑧ Field Trip 3 Kamikatsu Town - Leaf Business - Wooden craft - Leaf harvesting - Bush Cutting | ⑨ Visit to Yume Town | ⑩ Free Time |
| 10:00-12:00 | ⑪ Laboratory Visits | ⑫ Awa Dance Practice | ⑬ Local Sightseeing - Tokushima city | ⑭ Local Sightseeing - Hyotanjima Boat Tour | ⑮ Local Sightseeing - Naruto Whirlpool | | |
| 14:00-16:00 | Laboratory Visits | Awa Dance Experience | Awa Dance Experience | Awa Dance Experience | | | |

July 21- July 27: Common Activities

| First Week | | | | |
|------------|----------------|----------------------|---|---|
| July 21 | 17:00 18:00 | Registration | | |
| July 22 | 10:30 11:00 | Opening Ceremony | Yasuhiko Kawamura (Dean of Engineering) Toshihiro Moriga (Director, CICEE) | Opening Speech Opening Remark |
| | 11:00 12:00 | Common Lecture 1 | Pankaj Koinkar | Summer School Orientation: Program and Information |
| | 13:30 14:20 | Common Lecture 2 | Satoshi Hashimoto | Basic Japanese for Communication |
| | 14:30 15:50 | Invited Lecture 1 | Mahendra A. More | Field Emission Studies from Heterostructures |
| | 16:00 16:50 | Invited Lecture 2 | Poki Chen | The Young Entrepreneur Education in Taiwan |
| July 23 | 10:30 12:00 | Common Lecture 3 | Michihiro Nakamura | Multifunctionalized Organosilica Nanoparticles for Biomedical Applications |
| | 13:30 15:30 | Invited Lecture 3 | Mahendra D. Shirsat | Electronic Nose: Synthesis, Characterization and Application of Organic Materials |
| July 24 | 10:30 12:00 | Common Lecture 4 | Hajime Miura | Exercise is Medicine for Your Hhealthy Aging |
| | 13:30 14:20 | Invited Lecture 4 | Stephen Karungaru | Biometrics Systems and Applications |
| | 14:30 15:20 | Lecture 5 | Pankaj Koinkar | Carbon Nanomaterials and Related Nanostructures |
| | 15:30 16:20 | Invited Lecture 6 | Ri-ichi Murakami | World of Nanoscale and Band Structures |
| July 25 | 10:30 12:00 | Common Lecture 5 | Hitoshi Takubo | The English Language in a Globalized World |
| | 13:30 14:20 | Invited Lecture 7 | Shih Hsuan Chiu | Development of an Area-Forming Rapid Proto-ping System and Photopolymer Nano-Compositex |
| | 14:30 15:50 | Invited Lecture 8 | Ri-ichi Murakami | Development of an Area-Forming Rapid Proto-ping System and Photopolymer Nano-Composite |
| | 16:00 16:50 | Invited Lecture 9 | Cheng-Kang Lee | Recombinant Enzymes for Glycated Hemoglobin (HbA1c) Concentration Detection |
| July 26 | 17:00 21:00 | Yoshinogawa Festival | | Fireworks Festival |
| July 27 | Free time | | | |

July 28-August 3: Nanotechnology and Materials Science Course

| Second Week | | | | |
|-------------|----------------|---|--|--|
| July 28 | 10:30 12:00 | Special Lecture 1 | Toshio Takayanagi | Green Analytical Chemistry |
| | 13:30 14:20 | Special Lecture 2 | Yoshihisa Suzuki | Crystallization of Nanometer-sized Molecules and Particles |
| | 14:30 16:20 | Special Lecture 3 | Mikito Yasuzawa | Preparation of Functional Surface and Application for Biosensors |
| July 29 | 10:30 12:00 | Special Lecture 5 | Yoshihiro Deguchi | Industrial Applications of Laser Diagnostics |
| | 13:30 14:20 | Special Lecture 6 | Tatsuya Okada | Fundamentals of Transmission Electron Microscopy |
| | 14:30 16:20 | Special Lecture 7 | Antonio Nakagaito | Cellulose: from Paper to Nanocomposites |
| July 30 | 10:30 12:00 | Special Lecture 8 | Yasuhiro Mizutani | Fundamentals of Optics |
| | 13:30 14:20 | Lab Tour 1 | Mikito Yasuzawa | |
| | 14:30 15:20 | Lab Tour 2 | Tomoki Yabutani | |
| | 15:30 16:20 | Lab Tour 3 | Hitoshi Takagi | |
| July 31 | 12:30 13:30 | Field Trip : Otsuka Pharmaceutical Company (Food and Medical Division) | Departure from The University of Tokushima Arrival at Otsuka Pharmaceutical Company | |
| | 14:00 15:00 | | Visit to Medical Division | |
| | 15:00 15:30 | | Visit to Food Division | |
| | 16:00 17:00 | | Departure from Otsuka Pharmaceutical Company Arrival at The University of Tokushima | |
| August 1 | 10:30 12:00 | Special Lecture 9 | Yasushi Imada | Environmentally Friendly Organic Synthesis |
| | 13:30 14:20 | Special Lecture 10 | Kazuya Kusaka | Fundamentals of X-ray diffraction |
| | 14:30 15:20 | Special Lecture 11 | Kei-ichiro Murai | Structural Analysis using Synchrotron Radiation |
| | 15:30 16:20 | Special Lecture 12 | J. Rafael Alcantara-Avila | Process Intensification for energy reduction in Chemical Plants |
| August 2 | 9:00 13:00 | Mountain climbing: Bizan Mountain climbing | | |
| August 3 | Free Time | | | |

July 28-August 3: Electrical Engineering and Information Science Course

| Second Week | | | | |
|-------------|----------------|--|--|---|
| July 28 | 10:30 12:00 | Special Lecture 1 | Kenji Matsuura | Supporting Human Learning of Gross Motor skill |
| | 13:00 13:50 | Special Lecture 2 | Minoru Yoshida | Text Mining and Machine Learning |
| | 14:00 14:50 | Special Lecture 3 | Ito Momoyo | Human Behavior Analysis Focusing on Safety Driving Assistance Aystems |
| July 29 | 10:30 12:00 | Special Lecture 4 | Kenji Teranishi | Discharge Plasma: Principle and Applications |
| | 13:00 14:30 | Special Lecture 5 | Yoshifumi Nishio | Chaos and Its Applications |
| | 14:40 16:10 | Special Lecture 6 | Yoko Uwate | Nonlinear Circuits and Brain |
| July 30 | 10:30 12:00 | Special Lecture 7 | Jin-Ping Ao | Introduction of Semiconductor Devices |
| | 13:00 14:30 | Special Lecture 8 | Shinsuke Konaka | CMOS IC Technology and Its Basic Analog Circuit Design |
| | 14:40 16:10 | Special Lecture 9 | Masahide Hojo | Technical Challenges to Build a Smarter Grid |
| July 31 | 12:30 13:30 | Field Trip 1 : Otsuka Pharmaceutical Company (Food and Medical Division) | Departure from The University of Tokushima Arrival at Otsuka Pharmaceutical Company | |
| | 14:00 15:00 | | Visit to Medical Division | |
| | 15:00 15:30 | | Visit to Food Division | |
| | 16:00 17:00 | | Departure from Otsuka Pharmaceutical Company Arrival at The University of Tokushima | |
| August 1 | 10:30 12:00 | Special Lecture 10 | Stephen Karungaru | Introduction to Image Features Extraction Methods |
| | 13:00 13:50 | Special Lecture 11 | Yuichi Nagata | Evolutionary Computation in Combinatorial Optimization |
| | 14:00 14:50 | Special Lecture 12 | Masaki Oono | Music Information Retrieval |
| August 2 | 9:00 13:00 | Mountain Climbing | Bizan Mountain climbing | |
| August 3 | | | Free Time | |

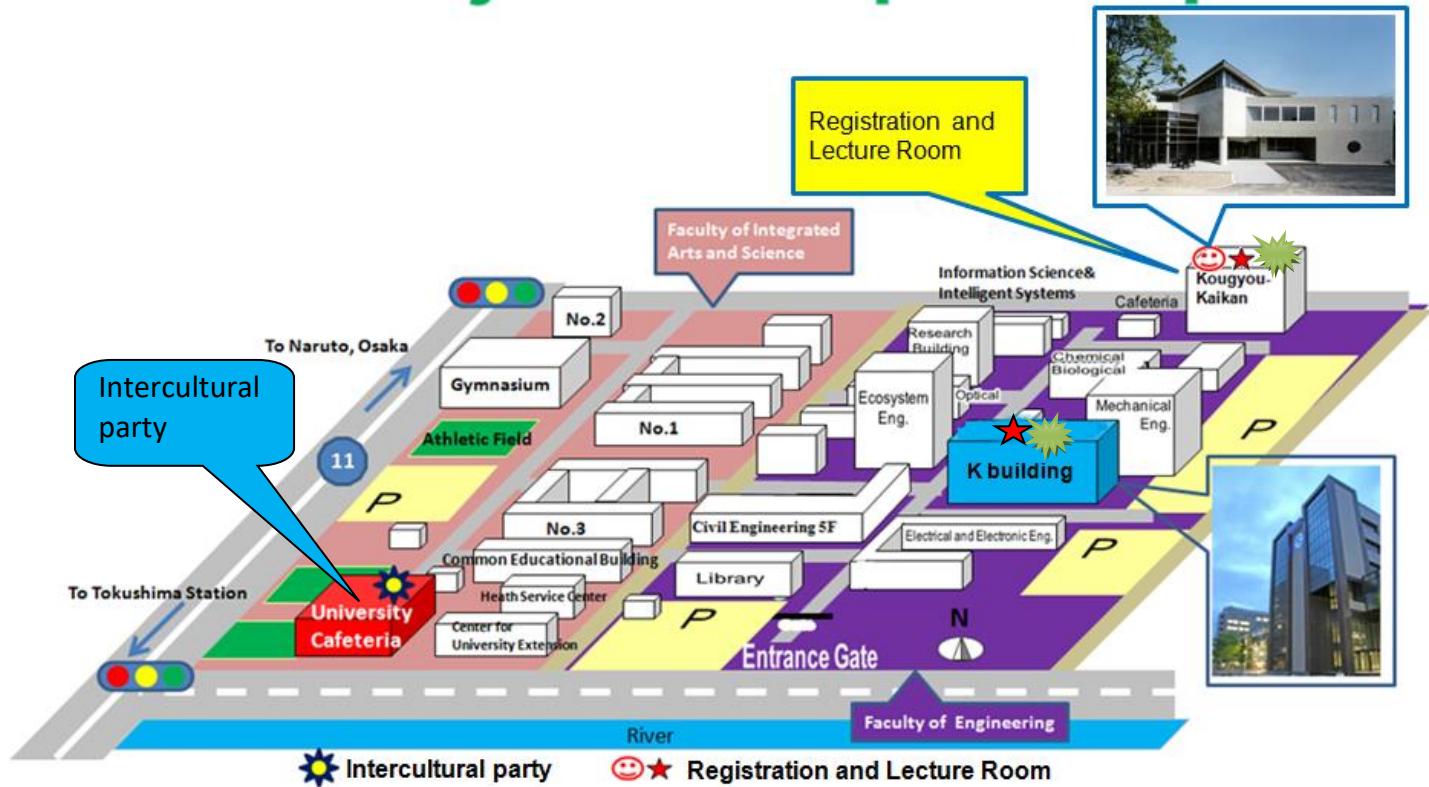
August 4 - August 10 : Common Activities

| Third Week | | | | |
|----------------|----------------|---|---|---------------------------------------|
| August 4 | 9:30 11:00 | Student Conference | Student’s Presentations 1 | Food and Agriculture |
| | 11:10 11:50 | | Citizen’s Presentation | Atomic Power Accident in FUKUSHIMA |
| | 13:00 15:00 | | Group Discussion | Safety of Food and Agriculture |
| | 15:20 16:00 | | Poster presentation | Safety of Food and Agriculture |
| | 16:30 18:15 | Cultural Show | | Puppet Theater |
| | 18:30 20:30 | Intercultural Party | | |
| | August 5 | 9:30 10:40 | Student Conference | Student’s Presentations 2 |
| 10:50 11:50 | | Student’s Presentations 3 | | Education and Local community |
| 13:00 15:00 | | Group Discussion | | Role of Local community for Education |
| 15:20 16:00 | | Poster presentation | | Role of Local community for Education |
| August 6 | 9:00 10:30 | Field Trip 2: Kagawa University, Takamatsu city | Departure from The University of Tokushima Arrival at Tsuda no Matsubara (Kinrin Park) | |
| | 12:15 12:45 | | Departure from Tsuda no Matsubara (Kinrin Park) Arrival at Kagawa University | |
| | 13:00 16:30 | | Lectures on disaster Management and The Earthquake Simulation Experience | |
| | 16:30 18:00 | | Departure from Kagawa University Arrival at The University of Tokushima | |
| | | | | |
| August 7 | 8:00 9:00 | Field Trip 3: Kamikatsu Town, Tokushima City | Departure from The University of Tokushima Arrival at Kamikatsu Town | |
| | 9:00 12:30 | | Visits to Maruki farm, Recycle Shop, Lunch, Yama no Gakko | |
| | 13:30 15:00 | | Orientation, Stage construction for theater , Theater group practice | |
| | 15:00 16:00 | | Group performance by students | |
| | 16:00 17:00 | | Group performance: Kome Kome Girls | |
| | | | | |
| August 8 | 7:30 9:00 | Orientation on Agricultural experience | | |
| | 9:00 16:30 | Experience on Leave Business, Leaf harvesting, Wooden craft, Buss cutting | | |
| | 16:30 17:00 | Closing ceremony Departure from Kamikatsu | | |
| August 9 | 9:00 13:00 | Visit to Yume Town | | |
| August 10 | Free Time | | | |

August 11- August 15: Common Activities

| Fourth Week | | | |
|-------------|----------------|---------------------------|---|
| August 11 | 10:30 13:00 | Laboratory Visits | Materials Sciences, Chemical Science |
| | 14:00 16:00 | | Nanotechnology and Electrical Engineering |
| August 12 | 14:00 16:00 | Japanese Dance Experience | Awa Dance Practice |
| | 17:00 21:00 | | Awa Dance Experience |
| August 13 | 16:00 18:00 | Local Sightseeing | Tokushima Central Park, Tokushima Castle museum |
| | 18:00 21:00 | | Awa Dance Experience |
| August 14 | 14:00 18:00 | Boat Tour | Hyotanjima Boat Tour |
| | 18:00 20:00 | | Awa Dance Experience |
| August 15 | 9:00 13:00 | Local Sightseeing | Visit to Naruto Whirl pool |
| | 14:00 14:30 | Closing | Closing Ceremony |

Josanjima Campus Map



Opening Ceremony: Memorial Hall, Second Floor, Alumni Building, Josanjima campus.



Nanotechnology and Materials Science Course: Memorial Hall, Second Floor, Alumni Building, Josanjima campus.



Electric Engineering Information Science Course: Seminar Room, First Floor, Alumni Building, Josanjima campus.