

7. Fieldwork

7.1. Overseas Fieldwork

The Green Asia Program aims to nurture next generation leaders equipped with excellent scientific knowledge as well as sound familiarity with the industry practices. To fulfil such an ambitious vision, Green Asia students are offered several industrial related activities during their candidature. The students attain industrial experience domestically through programs like “Practice School” and “Domestic Internship” (see **IV. 6**). The very best part of the program is that the students are given the opportunity to gain industrial experience from the leading industry all over the world, i.e., they are not limited to domestic industries. The program arranges several “Overseas Fieldwork” programs for the students. They are designed in such a way that students and participating faculty members can gain valuable field experience and establish collaborative activities with overseas industries and universities.

After engaging in tasks, the students earn the credit for Industrial Systems (I) (see **IV. 4**). The fieldworks have been conducted in Singapore (AY 2012), Thailand (AY 2012 and 2014), Malaysia (AY 2013), and South Korea (AY 2015).

(1) Academic Year 2016: Fieldwork in Taiwan

In the academic year of 2016, the Green Asia Program arranged the fieldwork in Taiwan (**Figure 4-2** and **Photo 4-8**). This two-days fieldwork included the academic program at the National Sun Yat-sen University (NSYSU) located in Sizihwan, Kaohsiung, Taiwan and the industrial visits to ScinoPharm Taiwan, Ltd. and the Taiwan Semiconductor Manufacturing Company (TSMC) Limited. Participants from the Kyushu University (KU) consisted of 17 faculties, 28 students and 2 technical staffs from the Green Asia Program Office. A total of 26 faculties and students from NSYSU participated in this short-term fieldwork.

The joint academic workshop was held at NSYSU where the program included three keynote lectures and an invited speech from both universities. Prof. Shieh Jentaie from NUS gave the keynote lecture on 3D molecular images of metabolites on whole human body skin with ambient mass spectrometry and their applications on precision medicine. Prof. H. Nagashima of KU lectured on the network of polymer chains producing a new concept for separation of metals from the organic products. Another keynote lecture was given by Prof. Chun Hu Chen from NSYSU and the title was the graphene interfaces in energy and optical applications. The morning academic session was concluded with the invited lecture by Assistant Prof. Yamamoto of KU on the contact formation on Ge and its application for future LSI.

The academic program in the afternoon was devoted to student activities: the first session was the group discussion and presentations by the M1 students followed by the presentation on the current research activities by senior students (D1 and M2) from both universities. The group discussion topics of the M1 students were: (1) Rise of the Machines; how to regulate them so that man can afford the service of machines? (2) Is climate change man-made or just a natural cycle? (3) Are We Doing Enough to Tackle the Crisis of Antibiotic Resistance? Students from both universities formed three groups and performed the brainstorming on each topic before conducting the joint presentation. The

presentation, along with the question and answer session provided great opportunities to share their ideas on diverse topics on the environmental and social issues. The Green Asia Program students obtained the first-hand experience in working with students from an overseas university and got a chance to showcase their leadership skills.

The industrial visit was arranged on the second day of the field trip. The first part of the program was a visit to ScinoPharm Taiwan Ltd. It is one of the biggest pharmaceutical companies in the world and probably the most important key player in Oncology. The Green Asia team was warmly welcomed by the ScinoPharm management. The CEO of ScinoPharm conducted a very informative presentation on the business practices in the pharmaceutical industry. ScinoPharm, a FDA approved company, was founded in 1997 and the present market value is more than 900 million USD. The students gained invaluable experience on the nature of APIs (Advanced Pharmaceutical Ingredients) and business structure together with patent and licensing strategies. The Green Asia team was given the laboratory tour in ScinoPharm and witnessed the advanced equipment and laboratory practices in a world class pharmaceutical company.

The second part of the industrial tour was the most exciting activity of the Green Asia Fieldwork AY2016 which was the visit to one of the best and most advanced semiconductor factories, i.e., the Taiwan Semiconductor Manufacturing Company (TSMC) Limited. Established in 1987, TSMC is the dedicated IC foundry with the capacity to produce various sizes of semiconductor wafers. The team was given the so-called Eco-friendly tour inside the company compound and hosted at the newly built Fab-14. A very comprehensive presentation was given on the history of the semiconductor industry, the market value, the market shares and most importantly the competitive nature of the industry together with the highly-protected IPs. Highly secretive and prudent security measures were justified with the big names of its customers such as Apple Inc., Samsung, IBM and many more. The students were explained the working nature of the clean room environment and the complex technologies to achieve and precisely maintain the parameters such as temperature, humidity and air quality. The visit to such a global leading company associating with the biggest names in the IT world gave the students unforgettable experience and great impression.

The last day of the fieldtrip was scheduled to visit research laboratories and participate in the live demonstration by Prof. Shieh Jentaie at NSYSU. Students and researchers from the aerosol and the biomedical science laboratory showcased their scientific activities. It was a great opportunity to experience and share the fundamental practices in the scientific laboratories of a top university in Taiwan. Prof. Shieh Jentaie and his team demonstrated their latest development on the chemical detecting device that can be readily employed to quickly examine the chemical usage in the food producing industry. The trip was concluded with the live demonstration of the pesticide level detection in the food (fruits from supermarkets), human body (caffeine level) and most commonly used products such as leather bags.

This Overseas Fieldwork was rather short but it provided invaluable experience to the team. The academic program was impressive while the industrial tour offered once in a lifetime experience and the lab demonstration was awesome.



Green Asia Program Short-term Fieldwork

FY2016-Taiwan-2017 January 17-19



Sponsors:

- Interdisciplinary Graduate School of Engineering Sciences (IGSES), Kyushu University
- Green Asia Program (Faculties, Administrative staffs)
- College of Science and Department of Chemistry, NSYSU
- Taiwan Semiconductor Manufacturing Company Limited
- ScinoPharm Taiwan, Ltd
- Green Asia Office members

Figure 4-2. Program of the fieldwork in Taiwan.

FY2016, Green Asia Program Short-term Fieldwork in Taiwan

(16/01/2017 – 19/01/2017)

(Academic visit: National Sun Yat-sen University, Kaohsiung, Taiwan

Industrial Visit 1: ScinoPharm Taiwan Ltd

Industrial Visit 2: Taiwan Semiconductor Manufacturing Company Limited)

1. Agenda and Schedule

16-01-2017

Departure and Hotel Check In

Time	Program
18:00	Meet at Fukuoka International Airport
20:10 – 22:10	Arrived at Kaohsiung International Airport
22:10 – 23:30	Check in at Kingdom Hotel

17-01-2017

Academic Program at National Sun Yat-sen University

Time	Program
Opening session (9:00 – 9:20)	
9:00 – 9:05	Opening and welcome speech by Prof. Wang Chih-Wei (Ong Chi Wi) <i>Professor Department of Chemistry, National Sun Yat-sen University</i>
9:05 – 9:10	Opening speech by Prof. Jun Tanimoto <i>Director of Green Asia Education Center, Head of personnel committee, Department of Energy and Environmental Engineering, Interdisciplinary Graduate School of Engineering Sciences, Kyushu University</i>
9:10 – 9:15	Opening speech by Prof. Chih-Wen Kuo <i>Vice President for International Affairs, National Sun Yat-sen University</i>
9:15 – 9:20	<i>Gift Exchange</i>
Keynote session I (9:20 – 10:40)	
Session Chair: Prof. Aya Hagishima <i>(Department of Energy and Environmental Engineering, Interdisciplinary Graduate School of Engineering Sciences, Kyushu University)</i>	
9:20 – 10:00	Keynote lecturer: Prof. Shieh Jentaie <i>National Sun Yat-sen University</i> Title: <i>3D molecular images of metabolites on whole human body skin with ambient mass spectrometry and their applications on precision medicine</i>
10:00 – 10:40	Keynote Lecturer: Prof. Hideo Nagashima <i>Department of Applied Molecular Chemistry, Institute for Materials Chemistry and Engineering</i> Title: <i>Network of Polymer Chains Producing A New Concept for Separation of Metals from the Organic Products</i>
Coffee Break & Networking (10:40 – 11:10)	
Keynote session II (11:10 – 11:50)	
Session Chair: Prof. Chi Wi Ong <i>(Professor Department of Chemistry, National Sun Yat-sen University)</i>	

Figure 4-2. Program of the fieldwork in Taiwan (continued).

11:10 – 11:50	Keynote lecturer: Prof. Chun Hu Chen <i>Professor Department of Chemistry, National Sun Yat-sen University</i> Title: <i>Graphene Interfaces in Energy and Optical Applications</i>
11:50 – 12:30	Invited Speaker: Assistant Prof. Yamamoto <i>Interdisciplinary Graduate School of Engineering Sciences, Kyushu University</i> Title: <i>Contact formation on Ge and its application for future LSI</i>
Lunch (12:30 – 13:30)	
Student Discussion Session (13:30 – 15:15)	
Session Chair: Mr. Choi Cheolyong <i>(D2 Student, Interdisciplinary Graduate School of Engineering Sciences, Kyushu University)</i>	
13:30 – 14:30	Student Discussion Program on Selected Topics
14:30 – 14:45	Presentation by Student Group I Title: Rise of the Machines, how to regulate them so that man can afford the service of machines?
14:45 – 15:00	Presentation by Student Group II Title: Is climate change man-made or just a natural cycle?
15:00 – 15:15	Presentation by Student Group III Title: Are We Doing Enough to Tackle the Crisis of Antibiotic Resistance?
Tea Break & Networking (15:15 – 15:35)	
Student Presentation Session (15:35 – 16:20)	
Session Chair: Mr. Ryota Yoneda <i>(D2 Student, Interdisciplinary Graduate School of Engineering Sciences, Kyushu University)</i>	
15:35 – 15:45	Speaker: Mr. Takayuki Maekura <i>D1 Student, Department of Applied Science for Electronics and Materials, IGSES, Kyushu University</i> Title: <i>Effect of n-type doping level on direct band gap light emission intensity for asymmetric metal/Ge/metal diodes</i>
15:45 – 15:55	Speaker: Mr. Lin Ping Cheng <i>Master Student- Prof. Jia Chen Wang Lab, National Sun Yat-sen University</i> Title: <i>Brief introduction to aerosol science – PM 2.5</i>
15:55 – 16:05	Speaker: Mr. Bolloju Sadish <i>Ph.D student – Prof. Jyh Tsung Lee Lab, National Sun Yat-sen University</i> Title: <i>Lithium ion cathode materials</i>
16:05 – 16:15	Speaker: Mr. M. L. Palash <i>M2 Student Department of Energy and Environmental Engineering, IGSES, Kyushu University</i> Title: <i>Topographic analysis of silica gel imaged with atomic force microscopy</i>
Concluding remarks and photo taking (16:15 – 16:30)	
17:00 – 20:00	Dinner
18-01-2017 Industrial Visit and Cultural Exchange Program	
Time	Program
8:00 – 10:00	Bus from Kaohsiung to Tainan Science and Technology Park
10:00 – 10:05	Short introductory speech by Prof. Wang Chih-Wei at ScinoPharm Taiwan, Ltd.
10:05 – 10:10	Short introductory speech by Prof. Jun Tanimoto at ScinoPharm Taiwan, Ltd.
10:10 – 10:15	Welcome remarks by Dr. YF from ScinoPharm Taiwan, Ltd.
10:15 – 10:45	Introduction to ScinoPharm Taiwan, Ltd.

Figure 4-2. Program of the fieldwork in Taiwan (continued).

10:45 – 10:55	Video presentation at ScinoPharm Taiwan, Ltd.	
10:55 – 11:10	Q&A	
11:10-11:20	Photo Taking	
11:20 – 12:00	Trip to TSMC & Enrollment	
12:00 – 13:00	Lunch	
13:00 – 13:05	Short introductory speech by Prof. Wang Chih-Wei at TSMC	
13:05 – 13:10	Short introductory speech by Prof. Jun Tanimoto at TSMC	
13:10 – 15:00	Session Chair: Prof. Wang Chih-Wei Keynote lecture and Introduction to TSMC by Executive Officer of TSMC	
15:00 – 15:30	Industrial tour at TSMC PIP/F14A Green Building/CSR Eco/Window Tour	
15:30– 17:30	Farewell & travelling back	
17:30	Dinner	
19-01-2017 Informal meeting and locality exposure before depart		
Time	Program	
9:00 – 10:00	Visit to PM2 Lab at NSYSU	
10:00 – 10:45	Demonstration on the direct detection of pollutant on skin at Prof. Shieh Lab	
10:45 – 11:15	Wrap up discussion & Closing ceremony	
11:15 – 13:00	Lunch & Hotel check out	
13:00 –	Head to the airport for the flight back to Fukuoka	
15:30 – 19:10	Flight to Fukuoka	
2. List of meals		
Coffee break	2 on the 2 nd day	
Lunch	1 on the 2 nd day 1 on the 3 rd day (TSMC) 1 on the 4 th day	Lunch box TSMC Lunch box
Dinner	1 on the 2 nd day 1 on the 3 rd day	Cijin Island (鴨角餐廳) Hai Pa Wang Restaurant
3. Gift exchange		
1. With NSYSU		
2. With Scinopharm		
3. With TSMC		

Figure 4-2. Program of the fieldwork in Taiwan (continued).

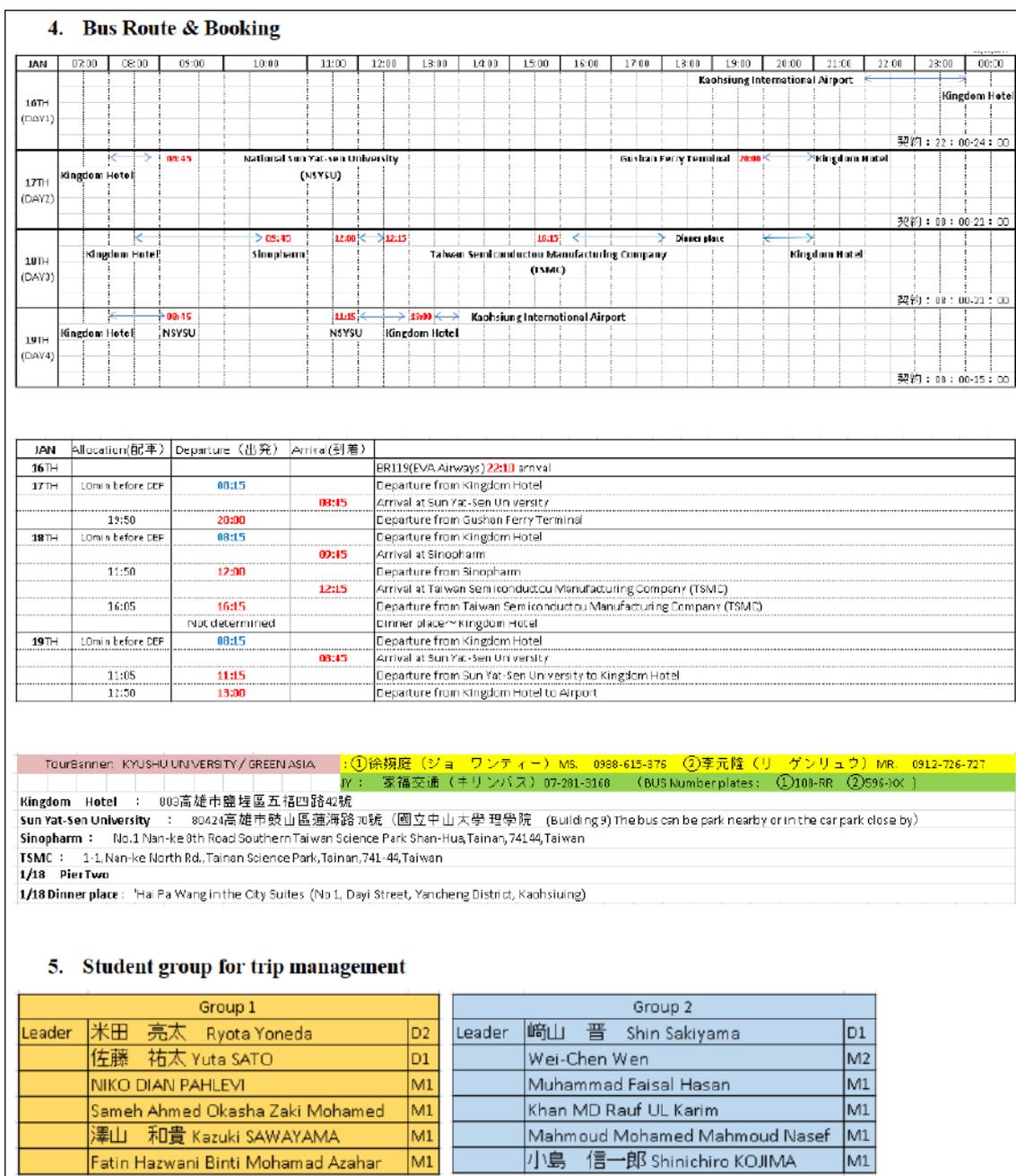


Figure 4-2. Program of the fieldwork in Taiwan (continued).

Group 3			Group 4		
Leader	Choi Cheolyong	D2	Leader	竹市 悟志 Satoshi Takeichi	D1
	前蔵 貴行 Takayuki Maekura	D1		NI'MAH AYU LESTARI	D1
	Muhamad Affiq Bin Misran	M1		M L Palash	M2
	REZKIA DEWI ANDAJANI	M1		Ramadan M M Aljamal	M1
	金 晟眞 Kim Sung Jin	M1		Wu Shun 吴 順	M1
	Eslam Naeim Hussien Abubakr	M1			

Group 5		
Leader	内田 勇氣 Yuki UCHIDA	D1
	Ibrahim Mohamed Abdelhak Maamoun	M1
	久我 一喜 Kazuki KUGA	M1
	Aditya Wibawa	M1
	Ali Mohamed Ali Ebrahim Abdelgawad	M1

6. Student group for academic activities

Group I

Members:

Group 1	米田 亮太 Ryota Yoneda	D2
	佐藤 祐太 Yuta SATO	D1
	竹市 悟志 Satoshi Takeichi	D1
	M L Palash	M2
	NIKO DIAN PAHLEVI	M1
	Sameh Ahmed Okasha Zaki Mohamed	M1
	澤山 和貴 Kazuki SAWAYAMA	M1
	Ali Mohamed Ali Ebrahim Abdelgawad	M1
	Ramadan M M Aljamal	M1

Disussion topic: "Rise of the Machines, how to regulate them so that man can afford the service of machines?"

Group II

Members:

Figure 4-2. Program of the fieldwork in Taiwan (continued).

Group 2	崎山 晋 Shin Sakiyama	D1
	NI'MAH AYU LESTARI	D1
	Wei-Chen Wen	M2
	Muhammad Faisal Hasan	M1
	Fatin Hazwani Binti Mohamad Azahar	M1
	REZKIA DEWI ANDAJANI	M1
	Aditya Wibawa	M1
	小島 信一郎 Shinichiro KOJIMA	M1
	Ibrahim Mohamed Abdelhak Maamoun	M1

Disussion topic: "Is climate change man-made or just a natural cycle?"

Group III

Members:

Group 3	Choi Cheolyong	D2
	前蔵 貴行 Takayuki Maekura	D1
	内田 勇氣 Yuki UCHIDA	D1
	Muhamad Affiq Bin Misran	M1
	Mahmoud Mohamed Mahmoud Nasef	M1
	金 晟眞 Kim Sung Jin	M1
	Wu Shun 吳 順	M1
	Eslam Naeim Hussien Abubakr	M1
	久我 一喜 Kazuki KUGA	M1
	Khan MD Rauf UL Karim	M1

Disussion topic: "Are We Doing Enough to Tackle the Crisis of Antibiotic Resistance?"

7. Participant List and Meal Arrangement

7.1. Faculty

No.	First name	Last name	Job Title	Nationality	M/F	Faculty	Department	Meal
1	Jun	Taniomoto	Professor	Japanese	M	IGSES	EEE	
2	Aya	Hagishima	Professor	Japanese	F	IGSES	EEE	
3	Hideo	Nagashima	Professor	Japanese	M	IGSES	MMS	
4	Kiichi	Hamamoto	Professor	Japanese	M	IGSES	ASEM	
5	Hiroshi	Nakashima	Professor	Japanese	M	IGSES	ASEM	

Figure 4-2. Program of the fieldwork in Taiwan (continued).

6	Michitaka	Otaki	Professor	Japanese	M	IGSES	ASEM	
7	Bidyut Baran	Saha	Professor	Bangladeshis	M	IGSES	I2CNER	No Beef
8	Osama	Eljamal	Associate Professor	Japanese	M	IGSES	ESST	Halal
9	Dong	Wang	Associate Professor	Chinese	M	IGSES	ASEM	
10	Keisuke	Yamamoto	Assistant Professor	Japanese	M	IGSES	ASEM	
11	Yasuyuki	Nakao	Professor	Japanese	M	GA	Green Asia	
12		Kyaw Thu	Associate Professor	Myanmar	M	GA	Green Asia	No Beef
13	Hiroshi	Furuno	Associate Professor	Japanese	M	GA	Green Asia	
14	Andrew	Spring	Assistant Professor	British	M	GA	Green Asia	
15	Tomoaki	Watanabe	Assistant Professor	Japanese	M	GA	Green Asia	
16	Takashi	Watanabe	Assistant Professor	Japanese	M	GA	Green Asia	
17	Yuuichi	Orimoto	Assistant Professor	Japanese	M	GA	Green Asia	

7.2. Students

No.	First name	Last name	Nationality	M/F	Faculty	Department	Grade	Meal
1	Shinichiro	Kojima	Japan	M	IGSES	ASEM	M1	
2	Kazuki	Kuga	Japan	M	IGSES	EEE	M1	
3	Sung Jin	Kim	Korea	M	IGSES	EEE	M1	
4	Kazuki	Sawayama	Japan	M	GSEng	ERE	M1	
5	MD Rauf UL Karim	Khan	Bangladesh	M	IGSES	ASEM	M1	Halal
6	Mahmoud Mohamed Mahmoud	Nasef	Egypt	M	IGSES	ASEM	M1	Halal
7	Aditya Wibawa	Wibawa	Indonesia	M	IGSES	ASEM	M1	Halal
8	Muhamad Affiq Bin	Misran	Malaysia	M	IGSES	ASEM	M1	Halal
9	Ali Mohamed Ali Ebrahim	Abdelgawad	Egypt	M	IGSES	ASEM	M1	Halal
10	Eslam Naeim Hussien	Abubakr	Egypt	M	IGSES	ASEM	M1	Halal
11	Fatin Hazwani Binti	Mohamad Azahar	Malaysia	F	IGSES	MMS	M1	Halal
12	Shun	Wu	China	M	IGSES	MMS	M1	
13	Sameh Ahmed Okasha Zaki	Mohamed	Egypt	M	IGSES	MMS	M1	Halal
14	Ramadan M M	Aljamal	Palestine	M	IGSES	EEE	M1	Halal
15	Muhammad Faisal	Hasan	Bangladesh	M	IGSES	EEE	M1	Halal
16	Ibrahim Mohamed Abdelhak	Maamoun	Egypt	M	IGSES	EEE	M1	Halal
17	Rezkia Dewi	Andajani	Indonesia	F	GSEng	ERE	M1	Halal

Figure 4-2. Program of the fieldwork in Taiwan (continued).

18	Niko Dian	Pahlevi	Indonesia	M	GSEng	ERE	M1	Halal
19	Yuki	Uchida	Japan	M	IGSES	MMS	D1	
20	Yuta	Sato	Japan	M	IGSES	ASEM	D1	
21	Satoshi	Takeichi	Japan	M	IGSES	ASEM	D1	
22	Takayuki	Maekura	Japan	M	IGSES	ASEM	D1	
23	Nimah Ayu	Lestari	Indonesia	F	IGSES	ASEM	D1	Halal
24	Wei Chen	Wen	Taiwan	F	IGSES	ASEM	M2	No Beef
25	M L	Palash	Bangladesh	M	IGSES	EEE	M2	Halal
26	Shin	Sakiyama	Japan	M	IGSES	ASEM	D1	
27	Cheolyong	Choi	Korea	M	IGSES	ASEM	D2	
28	Ryota	Yoneda	Japan	M	IGSES	ASEM	D2	

7.3. *Student /Post Doc Participants from NSYSU*

No.	First name	Last name		M/F				
1	Ping Cheng	Lin		M				
2	Bolloju	Sadish		M				
3	Cheng-Yu	Ho		M				
4.	Fasng-Yu	Chu		F				
5	Rui-Xian	Gan		M				
6	Sheng-Wen	Wang		M				
7.	Yi-Ru	Chen		M				
8	Tzu-Cheng	Lee		M				
9	Ying-Yu	Chen		F				
10	Siew-Chung	Tu		F				
11	Chih-Hung	Chou		M				
12	Amit	Sharma		M				
13	Yowan			M				
14	Shahnawaz	Khan	postdoc	M				
15	Sunil	Pandey	postdoc	M				
16	Rupesh			M				
17	Yi-Fei	Yang		F				
18	Yu-Chieh	Chen		F				
19	Tung	Chao		F				
20	Yi-Han	Chen		F				
21	Zong-Han	Wu		M				

7.4. *Technical Staffs*

No.	First name	Last name	Nationality	M/F	Faculty
1	Yuko	Hayashi	Japan	F	GA
2	Yoshiko	Kano	Japan	F	GA

8. **Contact Number in Taiwan for communication**

Figure 4-2. Program of the fieldwork in Taiwan (continued).

0952-311-150 (Prof. Ong, NSYSU)

0919-329-595 (Ms. Wen, Wei-Chen's mobile number)

9. Academic event time keepers

Mr. Muhammad Faisal Hasan and Mr. Khan MD Rauf UL Karim

10. Acknowledgements

We are grateful to the following Institutions and individuals for their strong and invaluable support for this trip.

- Green Asia Program (Faculties, Students and Administrative staffs)
- College of Science and Department of Chemistry, NSYSU
- Taiwan Semiconductor Manufacturing Company Limited
- ScinoPharm Taiwan, Ltd
- Green Asia Office members
- Prof. Wang Chih-Wei (Ong Chi Wi) (NSYSU)
- Prof. H. Nagashima (KU)

Special thanks to Ms. Mieko Samoto, Ms. Yoshiko Kano, Ms. Yuko Hayashi and Ms. Yoko Nishio of GA office for their strong support.

Figure 4-2. Program of the fieldwork in Taiwan (continued).

Acknowledgements

We are grateful to the following organizations in making the trip a success: Interdisciplinary Graduate School of Engineering Sciences (IGSES), Kyushu University, College of Science and Department of Chemistry, NSYSU (faculties and students), Taiwan Semiconductor Manufacturing Company Limited, and ScinoPharm Taiwan Ltd.

We would like to express our special thanks to Prof. Wang Chih-Wei (Ong Chi Wi), Prof. Shieh Jentaie and all the students and members from NSYSU for their great effort and support. We are indebted to Prof. Jun Tanimoto for giving opening speeches and being our leader, all the keynote lecturers (Prof. Prof. Shieh Jentaie, Prof. Hideo Nagashima, Prof. Chun Hu Chen and Prof. Keisuke Yamamoto), session chairs (Prof. Bidyut Baran Saha, Prof. Aya Hagishima, Mr. Choi Cheolyong and Mr. Ryota Yoneda) and oral presenters (Mr. Takayuki Maekura, Mr. Lin Ping Cheng, Mr. Bolloju Sadish and Mr. M. L. Palash) and all the students for group presentations.



Photo 4-8. Academic program at the National Sun Yat-sen University (January 17, 2017).



Photo 4-8. Academic program at the National Sun Yat-sen University (January 17, 2017) (continued).



Photo 4-9. Group photo at the National Sun Yat-sen University (January 17, 2017).



Photo 4-10. Visit to SinoPharm (January 18, 2017).

(2) 2017 Academic Year: Fieldwork in Indonesia

The overseas fieldwork in 2017 was conducted from September 12 to 17 in Indonesia, and 11 Green Asia Program students, 2 regular course students and 3 faculty members visited Sebelas Maret University and facilities in Surakarta, Indonesia to attend a conference and workshops (**Photo 4-11**). The main purposes of this fieldwork were to provide the students opportunities (1) to give a presentation in an international conference, (2) to increase their knowledge for modern Indonesian industries, (3) to deepen exchanges between the students and with students at Sebelas Maret University, and (4) to give a deep view into the culture, history and working practices in Indonesia. The Green Asia Program students were required to acquire basic knowledge of the target destinations, and to submit a report no later than 7 days after the conclusion of the excursion.

After arriving at Surakarta on September 12, the participants visited Museum Keris Nusantara (keris or kris means traditional swords in Indonesian and Malaysian areas).

On September 13, the 3rd International Conference on Industrial, Mechanical and Chemical Engineering (ICIMECE 2017) that was organized by Sebelas Maret University and Kyushu University was held at Sebelas Maret University. The aims of the conference were to provide the delegates opportunities to exchange new ideas between different areas, to establish business or research relations, and to find global partners for future collaboration. In the morning session, 5 keynote speakers, Prof. Jun Fukai (Kyushu University), Prof. Dato' Dr. Rosil Bin Mohd. Yunus (Universiti Malaysia Pahang), Prof. Aya Hagishima (Kyushu University), Prof. Yoshinori Itaya (Gifu University), and Dr. Agus Purwanto (Sebelas Maret University), and 3 invited speakers, Assoc. Prof. M. Aziz (Tokyo Institute of Technology), Assoc. Prof. Uju (IPB), and Dr. Sumarno (Institut Teknologi Sepuluh Nopember) introduced their researches. Then the student presentation session was held in the afternoon. The aggregate number of participants in this conference was 144.

From September 14, the students and staffs attend 4 workshop events: Hybrid Electric Workshop (September 14), Lithium Ion Battery Workshop (September 15), Biogas and Natural Dye Manufacturing Workshop (September 16), and Micro Hydro Workshop (September 16). During this period, they also visited some historical places such as Borobudur Temple, Sangiran Museum, and Museum Batik Danar Hadi.

(3) Academic Year 2018

The Overseas Fieldwork was not conducted in the academic year of 2018.

Time Schedule of Fieldwork in Indonesia

DATE	TIME		DESCRIPTION	NOTE
Tuesday, 12 September 2017	10:20 AM	-	Arrived at Adi Sumarmo International Airport	
	10:20 AM	- 11:00 AM	Going to Keris Museum	
	11:00 AM	- 12:00 PM	Keris Museum Tour	Optional
	12:00 PM	- 12:30 PM	Going to Lunch	
	12:30 PM	- 01:30 PM	Lunch	
	01:30 PM	- 02:00 PM	Going to UNS Inn Hotel	
	02:00 PM	- 07:00 PM	Check in at UNS Inn Hotel	
	07:00 PM	- 09:00 PM	Dinner at UNS Inn Hotel	
Wednesday, 13 September 2017	07:45 AM	- 08:00 AM	Going to ICIMECE Conference Venue	
	08:00 AM	- 07:00 PM	ICIMECE Event's	
	07:00 PM	- 09:00 PM	Gala Dinner ICIMECE Convergence Venue	
Thursday, 14 September 2017	06:00 AM	- 06:45 AM	Breakfast at UNS Inn Hotel	
	07:00 AM	- 10:00 AM	Going to PLTH Pantai Baru, Bantul (Workshop Venue)	
	10:00 AM	- 12:30 PM	Hybrid Electric Workshop (1)	Include Lunch
	12:30 PM	- 03:00 PM	Going to Borobudur Temple	
	03:00 PM	- 05:00 PM	Borobudur Temple Tour	
	05:00 PM	- 08:00 PM	Going to UNS Inn	
	08:00 PM	- 09:00 PM	Dinner	
	09:00 PM	-	Rest	
Friday, 15 September 2017	06:00 AM	- 06:45 AM	Breakfast at UNS Inn Hotel	
	07:00 AM	- 07:30 AM	Going to Purwosari (Workshop venue)	
	07:30 AM	- 11:00 AM	Battery Manufacturing Workshop (2)	
	11:00 AM	- 12:30 PM	Lunch	
	12:30 PM	- 02:00 PM	Going to Sangiran	
	02:00 PM	- 04:00 PM	Sangiran Museum Tour	
	04:00 PM	- 05:30 PM	Going back to UNS Inn Hotel	
	07:00 PM	- 08:00 PM	Dinner	
	09:00 PM	-	Rest	
Saturday, 16 September 2017	06:00 AM	- 06:45 AM	Breakfast at UNS Inn Hotel	
	07:00 AM	- 08:30 AM	Going to Bulu Sukoharjo (Workshop Venue)	
	08:30 AM	- 10:30 AM	Biogas and Natural Dye Workshop (3)	
	10:30 AM	- 12:30 PM	Going to Bribin, Gunung Kidul	
	12:30 PM	- 01:00 PM	Lunch	
	01:00 PM	- 03:00 PM	Microhydro Workshop (4)	
	03:00 PM	- 06:00 PM	Going back to UNS Inn Hotel	
	07:00 PM	- 08:00 PM	Dinner	
Sunday, 17 September 2017	06:00 AM	- 06:45 AM	Breakfast at UNS Inn Hotel	
	07:00 AM	- 08:00 AM	Going to Dhanar Hadi Batik Museum	
	08:00 AM	- 11:00 AM	Batik Workshop at Dhanar Hadi Museum (5)	
	11:00 AM	- 12:00 PM	Going back to Hotel for Check out preparation	
	12:00 PM	- 12:30 PM	Checkout from UNS INN Hotel	
	12:30 PM	- 01:15 PM	Lunch	
	01:15 PM	- 02:00 PM	Going to Adi Sumarmo international Airport	



Photo 4-11. Fieldworks in Indonesia.

7.2. Domestic Fieldwork

Main aims of the Domestic Fieldwork are to provide students an opportunity for learning the current status of industry or environmental issues and policies in companies or facilities in Japan. The fieldwork may be a good chance particularly for international students to deepen their knowledge on Japan. After engaging in tasks, the students earn the credit for Industrial Systems (II) (see IV. 4).

(1) Academic Year 2016: Fieldwork in Saga and Nagasaki

Domestic Fieldwork in the academic year of 2016 was conducted in Saga and Nagasaki during two days from December 12 and 13, 2016. The participants are 19 students in the Green Asia Program, 11 students in the Intellectual Exchange and Innovation (IEI) Program, and 2 faculty members, and they visited Yoshinogari Mega Solar Power Plant, Nagasaki Atomic Bomb Museum, Mitsubishi Heavy Industries Historical Museum, and Isahaya Reclamation Museum.

The students were divided into some small groups with 5 to 6 members, and a leader and a sub-leader were appointed in each group. Japanese students are asked to play a role as a translator. In addition, the Green Asia Program students were given the following tasks.

Before the fieldwork:

- Each student does a homework on the facilities beforehand to find something to think of at least two questions

During the fieldwork:

- The leader of each group discusses the questions of his or her group members with them, and asks two selected questions.
- Japanese students explain Japanese-language explanation and answers for international students in English.
- Japanese students translate English-language questions from international students into Japanese ones to communicate staffs in the facilities.

After the fieldwork:

- Each group submits a report.
- Each leader and sub-leader are responsible for editing the report, and arrange that any students write at least one section.



Photo 4-12. At Yoshinogari Mega Solar Power Plant.

Time Schedule of the Fieldwork in Saga and Nagasaki

Monday, December 12, 2016	
09:00 – 09:50	Move from the Ito campus to the Chikushi campus (by a bus)
10:00 – 11:00	Move from the Chikushi campus to Yoshinogari Mega Solar Power Plant <u>Yoshinogari Mega Solar Power Plant</u>
11:00 – 11:10	Video explanation
11:00 – 12:10	Tour
12:10 – 12:40	Questions and answers
12:50 – 15:30	Move from the Yoshinogari Mega Solar Power Plant to Nagasaki Atomic Bomb Museum
15:30 – 16:00	Tour in Nagasaki Atomic Bomb Museum and Nagasaki Peace Memorial Park

Tuesday, December 13, 2016	
09:30 – 10:15	Move from the hotel to Mitsubishi Heavy Industries Historical Museum <u>Mitsubishi Heavy Industries Historical Museum</u>
10:15 – 11:15	Video explanation, tour, and questions and answers
11:15 – 13:00	Move from Mitsubishi Heavy Industries Historical Museum to Isahaya Reclamation Museum <u>Isahaya Reclamation Museum</u>
13:10 – 14:10	Tour, and questions and answers
14:45 – 17:30	Move from Isahaya Reclamation Museum to the Chikushi campus
16:30	Arrive at the Ito campus

(2) Academic Year 2017: Fieldwork in Fukuoka

On February 2, 2018, 10 Green Asia Program students and 1 Green Asia faculty member visited Fukuoka Rinkai 3R Station (Recycling Plaza) and Fukuoka City Disaster Prevention Center in Fukuoka city (**Photo 4-13**). The major aims of this fieldwork were to learn the recycle process at the former and how to protect themselves from natural disasters at the latter.

Time Schedule of the Fieldwork in Fukuoka

09:30 – 10:30	Move from the Ito campus to the Chikushi campus (by a bus)
10:30 – 11:15	Move from the Chikushi campus to Fukuoka Rinkai 3R Station (Recycling Plaza) <u>Fukuoka Rinkai 3R Station (Recycling Plaza)</u>
11:30 – 12:30	Tour and questions and answers
12:30 – 13:00	Hands-on experience for a papermaking process <u>Fukuoka City Disaster Prevention Center</u>
15:00 – 16:00	Simulated experiences of earthquake, fire, and flood
16:00 – 17:00	Lecture to improve judgments under critical situations, and questions and answers
17:00 –	(The participants went home on their own)

The students were divided into some small groups, and a leader and a sub-leader were appointed in each group. Japanese students are asked to play a role as a translator. After the fieldwork, each group was required to submit a report. Any student was assigned to at least one section with more than 400 words, and the leader and sub-leader were responsible for editing the report.



Photo 4-13. At Fukuoka City Disaster Prevention Center.

(3) Academic Year 2018: Fieldwork in Oita and Kumamoto

From December 6 to 7, 2018, the domestic fieldwork in 2018 was conducted in Oita and Kumamoto. The 26 participants consisted of not only parties involved in the Green Asia Program (8 students and 1 faculty member) but also ones from the IEI Program (16 students and 1 faculty member) that has been operated as an international education program for doctoral students in the Interdisciplinary Graduate School of Engineering Sciences, Kyushu University. They visited Kyushu Electric Power Hatchobaru Geothermal Power Plant in Oita and Honda Motor Kumamoto Factory (**Photos 4-14 and 4-15**).

The students were divided into some small groups, and a leader was appointed in each group. As a preparative assignment, each student was required to acquire basic knowledge about the power plant and the factory that he or she would visit, and prepare at least 2 questions for each destination. Japanese students are asked to play a role as a translator. After the fieldwork, the Green Asia Program students were required to submit a report.



Photo 4-14. Kyushu Electric Power Hatchobaru Geothermal Power Plant.



Photo 4-15. Honda Motor Kumamoto Factory.

Time Schedule of the Fieldwork in Oita and Kumamoto

Thursday, December 6, 2018	
10:00 – 13:00	Move from the Chikushi campus to Kyushu Electric Power Hatchobaru Geothermal Power Plant (including lunch time)
13:00 – 14:30	<u>Kyushu Electric Power Hatchobaru Geothermal Power Plant</u> Video explanation, tour, questions and answers
15:30 – 16:10	Visit at Daikanbo in Mt. Aso

Friday, December 7, 2018	
08:00 – 08:50	Move from the hotel to Honda Motor Kumamoto Factory <u>Honda Motor Kumamoto Factory</u>
09:00 – 11:00	Video explanation, tour, and questions and answers
14:00 – 15:30	Tour around the old town in Yanagawa city
15:30 – 17:00	Move from Yanagawa to the Chikushi campus
18:00	Arrive at the Ito campus

7.3. Joint Fieldwork of Three Programs for Leading Graduate School

The Green Asia Program conducted annual joint fieldwork with two Programs for Leading Graduate School, “Global Resource Management Program” (Doshisha University) and “TAOYAKA Program for creating a flexible, enduring, peaceful society” (Hiroshima University), once a year during 3 years from 2014. It involved lectures, tours in facilities, and the student session.

The first joint fieldwork was conducted in Beppu in 2014, which was hosted by the Global Resource Management Program. In 2015, the TAOYAKA Program organized the fieldwork in Okinoshima island, Shimane. The Green Asia Program therefore hosted the fieldwork in Kitakyushu, Oita and Kumamoto areas in 2016. Unfortunately, the fieldwork could not continue after 2017.

Academic Year 2016: Fieldwork in Kitakyushu, Oita and Kumamoto (Aso)

The Three Leading Graduate School Program Joint Fieldwork in the academic year of 2016 was Leading Graduate School Program, and conducted in Kitakyushu, Oita and Kumamoto areas from September 27 to 30. This fieldwork dealt with “strategic solutions of environmental issues associated with growth of an industry” as a major theme. The number of the participants was 32 in total: 26 students (13 from Kyushu University, 8 from Doshisha University, and 5 from Hiroshima University), 4 faculty members (1 from Kyushu University, 1 from Doshisha University, and 2 from Hiroshima University) and 2 staffs from Kyushu University, and the number of their nationalities was 13 in total. The Green Asia Program students participated got credits for Special Lecture for Social, Environmental, and Economic Systems (I).

On September 27, the participants got together at Kitakyushu Environmental Museum, and after getting briefed on the fieldwork, the students were divided into 4 groups. Then they heard the accounts of overcoming pollution problems in City of Kitakyushu by Mr. Oda (Environmental Bureau of City of Kitakyushu), and toured in the museum (**Photo 4-16**). They next moved to Water Plaza Kitakyushu to take a tour of facilities, and received an explanation about overseas expanding cooperation of water supply operation by Mr. Koba. There are many industries such as an ironworks in Kitakyushu, which contributed to modernization of Japan. Kitakyushu was known as an industrial area, and the inhabitants therefore suffered from severe air and water pollutions for a long time. The public and private efforts concerted have been made to solve such problems, and the skills and technologies have also been utilized overseas. Then the participants moved to Beppu, Oita.

On September 28, first Mr. Watanabe, Division of Industrial Promotion, Oita Prefectural Government, lectured about renewable energies in Oita, and then the participants toured in Mega Solar Power Plant of Oita Solar Power Co., Ltd. (**Photo 4-16**) and Saganoseki Copper Smeltery of Pan Pacific Copper Co., Ltd. The Oita prefecture is one of areas assigned as “Energy Park for the Next Generation”, and working on geothermal, wind, and solar power generation.

On September 29, after moving to Mt. Aso, Kumamoto prefecture, the participants were lectured about culture and tradition in the grassland, and effects of earthquake in the Aso area by Prof. Nakagoshi (Hiroshima University). Then the tour the mine and processing plant of Japan Limonite Co., Ltd. was conducted (**Photo 4-16**).

On September 30, the participants moved to Kyushu University and held the Student Session (**Photo 4-17**). The assignment was to develop a strategic master plan to overcome pollution problems

associated with growth of an industry in a particular area or country. Each students' group make a presentation from a different point of view, and discussed actively.



Photo 4-16. Tours in Kitakyushu Environmental Museum (top left), Oita Mega Solar Power Plant (top right) and Japan Limonite Co., Ltd. (bottom).



Photo 4-17. Student Session.

Schedule of the Fieldwork in Kitakyushu, Oita and Kumamoto (Aso)

Date and Place	Event
September 27 Kitakyushu	Gathering at Kitakyushu Environmental Museum • Briefing on the fieldwork and grouping (Assist. Prof. Miki, Kyusyu University) • Lecture on history of overcoming pollution problems in Kitakyushu (Mr. Oda, Environmental Bureau of City of Kitakyushu) • Tour in Kitakyushu Environmental Museum • Tour in Water Plaza Kitakyushu • Lecture on overseas expanding cooperation of water supply operation (Mr. Koba, Water Plaza Kitakyushu) Move to Beppu, Oita (and preparation of the Student Session)
September 28 Beppu, Oita	• Lecture on renewable energies in Oita (Mr. Watanabe, Division of Industrial Promotion, Oita Prefectural Government) • Tour in Mega Solar Power Plant of Oita Solar Power Co., Ltd. • Tour in Saganoseki Copper Smeltery of Pan Pacific Copper Co., Ltd. (Preparation of the Student Session)
September 29 Aso, Kumamoto	Move to Aso, Kumamoto • Lecture on culture and tradition in the grassland, and effects of earthquake in the Aso area (Prof. Nakagoshi, Hiroshima University) • Tour in the mine and processing plant of Japan Limonite Co., Ltd. (Preparation of the Student Session)
September 30 Fukuoka	Move to Fukuoka • Student Session in the Chikushi campus, Kyushu University

8. Laboratory Rotation

In order to acquire broad academic skills and knowledge, each Green Asia Program student participates in “Laboratory Rotation” which is a research activity in three different laboratories including his or her research supervisor’s laboratory during the first two years of the course (master’s course) (**Figure 4-3**). For the purpose, the students are strongly recommended that he or she choose a laboratory, the research area of which is different from his or her main research. Furthermore, a laboratory for a humanity or a social science is also encouraged. The period of the research activity in each laboratory, except in the supervisor’s laboratory, is approximately 3 months or more. After completing each period, the student submits a report describing the achievements of the research activity. Finally, the student delivers an oral presentation detailing the key aspects of the research at the time of the qualifying examination (QE) (see also **II. 2.3** and **IV. 10**).

According to the new curriculum that started in the academic year of 2017, the students after the 5th batch are allowed to conduct researches only in two different laboratories (the supervisor’s laboratory and another).

The laboratory rotations conducted in the academic years from 2016 to 2018 are listed in **Table 4-14**.

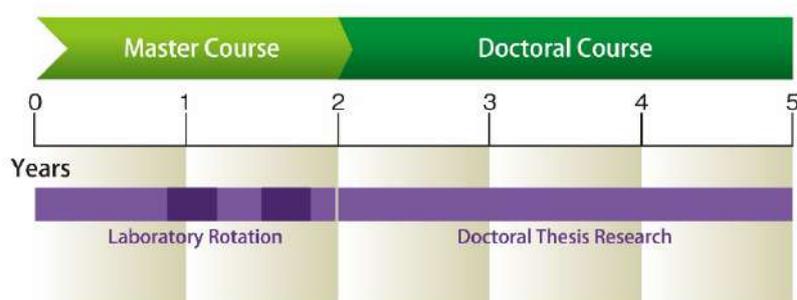


Figure 4-3. Laboratory Rotation in the students' research activities.

Table 4-14. Laboratory Rotation conducted in AY 2016–2018

Student (Department)	Laboratory Rotation I	Laboratory Rotation II	Laboratory Rotation III [Main Major]
3rd Batch Student			
Ni'mah Ayu Lestari (ASEM)	Functional inorganic materials chemistry (MMS) 2015.05–08	Department of Environmental Design, Graduate School of Design 2016.05–08	Chemical reaction engineering (ASEM)
Hatem Omar Amin Mostafa Elserafy (ASEM)	Physical polymer science (MMS) 2015.10–2016.02	Functional device engineering (ASEM) 2016.04–07	Opto-electronics (ASEM)
Kibria Mohammad Tawheed (MMS)	Thermal energy conservation system (EEE) 2015.04–07	Opto-electronics (ASEM) 2016.01–04	Surface science (MMS)
Cheng Xiaoyang (MMS)	Opto-electronics (ASEM) 2015.07–09	Pusan National University 2016.06–08	Physical polymer science (MMS)
4th Batch Student			
Yusuke Egawa 江川 雄亮 (MMS)	Functional inorganic materials chemistry (MMS) 2016.05–07	Fundamental plasma physics (AEES) 2016.11–2017.01	Advanced space propulsion (AEES)
Tsubasa Oji 大路 翼 (ERE)	Applied quantum physics and nuclear engineering, Graduate School of Engineering 2016.05–07	Theory of functional materials (MMS) 2016.10–12	Mineral processing, recycling, and environmental remediation (ERE)
Keishi Oyama 小山 恵史 (ERE)	Earth and planetary sciences, Graduate School of Sciences 2016.05–07	Theory of functional materials (MMS) 2016.08–10	Mineral processing, recycling, and environmental remediation (ERE)
Wei-Chen Wen 温 偉辰 (ASEM)	Material science for electrochemistry (ASEM) 2016.04–07	Crystal physics and engineering (ASEM) 2017.04–06	Functional device engineering (ASEM)

Departments of Interdisciplinary Graduate School of Engineering Sciences: ASEM (Applied Science for Electronics and Materials), MMS (Molecular and Materials Sciences), EEE (Energy and Environmental Engineering), AEES (Advanced Energy Engineering Science), ESST (Earth System Science and Technology)

Department of Graduate School of Engineering: ERE (Earth Resource Engineering)

Table 4-14. Laboratory Rotation in AY 2016–2018 (continued)

Student (Department)	Laboratory Rotation I	Laboratory Rotation II*	Laboratory Rotation III [Main Major]
4th Batch Student (continued)			
Gede Dalton Surya Prayoga (ASEM)	Environmental policy (GA) 2017.01–03	Organic synthesis (GA) 2017.05–07	Chemical reaction engineering (ASEM)
Sampad Ghosh (ASEM)	Physical polymer science (MMS) 2016.06–09	Functional device engineering (ASEM) 2017.04–07	Opto-electronics (ASEM)
Dabin Chung (ASEM)	Thermal science and engineering (I ² CNER) 2016.11–2017.02	Material science for electrochemistry (ASEM) 2017.04–06	Advanced device materials (ASEM)
Alisa Bannaron (MMS)	Molecular function engineering (ASEM) 2016.05–08	Novel structure in organic chemistry (MMS) 2017.04–07	Physical polymer science (MMS)
John James Duckworth (MMS)	Orthopedic surgery, Faculty of Medicine, Kurume University 2017.02–04	Biomedical sciences, Fukuoka Dental College 2017.05–07	Mechanics and materials (MMS)
Rezwan Ahmed (MMS)	Applied electromagnetics (ASEM) 2016.07–11	Environment and new energy (MMS) 2016.12–2017.04	Surface science (MMS)
Ali Yousefian (EEE)	Space environmental fluid dynamics (ESST) 2016.09–12	Plasma simulation physics (AEES) 2017.02–04	Advanced space propulsion (AEES)
M L Palash (EEE)	Aeronautics and astronautics, Graduate School of Engineering 2016.01–04	Surface science (MMS) 2016.12–2017.02	Thermal science and engineering (I ² CNER)
Cao Cong (ERE)	Fundamental mathematics (IMI) 2016.05–08	Mineral processing, recycling, and environmental remediation (ERE) 2016.10–12	Exploration geophysics (ERE)
5th Batch Student			
Shinichiro Kojima 小島 信一郎 (ASEM)	Fusion plasma engineering (AEES) 2017.04–06	–	High energy plasma dynamics (AEES)
Kazuki Kuga 久我 一喜 (EEE)	Urban and architectural environment engineering (EEE) 2017.04–06	–	Thermal environmental system (EEE)

Departments of Interdisciplinary Graduate School of Engineering Sciences: ASEM (Applied Science for Electronics and Materials), MMS (Molecular and Materials Sciences), EEE (Energy and Environmental Engineering), AEES (Advanced Energy Engineering Science), ESST (Earth System Science and Technology)

Department of Graduate School of Engineering: ERE (Earth Resource Engineering)

Other institutes: GA (Green Asia Education Center), I²CNER (International Institute for Carbon-Neutral Energy Research), IMI (Institute of Mathematics for Industry)

*The "-" sign indicates exemption from the activity under the new curriculum.

Table 4-14. Laboratory Rotation in AY 2016–2018 (continued)

Student (Department)	Laboratory Rotation I	Laboratory Rotation II*	Laboratory Rotation III [Main Major]
5th Batch Student (continued)			
Kim Sung Jin 金 晟眞 (EEE)	Functional inorganic materials chemistry (MMS) 2017.10–2018.01	–	Coastal environmental research (ESST)
Kazuki Sawayama 澤山 和貴 (ERE)	Exploration geophysics (ERE) 2017.02–04	Exploration geophysics (ERE) 2017.06–08	Geothermics (ERE)
Khan MD Rauf UL Karim (ASEM)	Inorganic optoelectronic materials engineering (ASEM) 2017.04–06	–	Photonic system engineering (ASEM)
Mahmoud Mohamed Mahmoud Nasef (ASEM)	Photonic system engineering (ASEM) 2018.04–07	–	Opto-electronics (ASEM)
Aditya Wibawa (ASEM)	Advanced device materials (ASEM) 2018.05–07	–	Chemical reaction engineering (ASEM)
Muhamad Affiq Bin Misran (ASEM)	Opto-electronics (ASEM) 2017.03–12	–	Photonic system engineering (ASEM)
Ali Mohamed Ali Ebrahim Abdelgawad (ASEM)	Ionized gas dynamics (ASEM) 2017.06–09	–	Applied electromagnetics (ASEM)
Eslam Naeim Hussien Abubakr (ASEM)	Gigaphoton next GLP, Graduate School of Information Science and Electrical Engineering 2017.05–12	–	Applied electromagnetics (ASEM)
Fatin Hazwani Binti Mohamad Azahar (MMS)	Thermal science and engineering (I ² CNER) 2017.10–12	–	Mechanical engineering (GA)
Wu Shun 吳 順 (MMS)	Physical polymer science (MMS) 2018.02–05	–	Mechanics and materials (MMS)
Sameh Ahmed Okasha Zaki Mohamed (MMS)	Environmental fluid dynamics (ESST) 2018.04–07	–	Nanoscience and nanotechnology of nanostructured materials (MMS)

Departments of Interdisciplinary Graduate School of Engineering Sciences: ASEM (Applied Science for Electronics and Materials), MMS (Molecular and Materials Sciences), EEE (Energy and Environmental Engineering), AEES (Advanced Energy Engineering Science), ESST (Earth System Science and Technology)

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Table 4-14. Laboratory Rotation in AY 2016 to 2018 (continued)

Student (Department)	Laboratory Rotation I	Laboratory Rotation II*	Laboratory Rotation III [Main Major]
5th Batch Student (continued)			
Ramadan M M Aljamal (EEE)	Thermal science and engineering (I ² CNER) 2017.04–06	–	Environmental fluid dynamics (ESST)
Muhammad Faisal Hasan (EEE)	Thermal environmental system (EEE) 2017.04–06	–	Thermal energy conservation system (EEE)
Ibrahim Mohamed Abdelhak Maamoun (EEE)	Thermal science and engineering (I ² CNER) 2017.04–06	–	Environmental fluid dynamics (ESST)
Rezkia Dewi Andajani (ERE)	Advanced mathematics technology (IMI) 2018.01–04		Exploration geophysics (ERE)
Niko Dian Pahlevi (ERE)	Economic geology (ERE) 2017.04–06	–	Mineral processing, recycling and environmental remediation (ERE)
6th Batch Student			
Akira Nishio 西尾 陽 (ASEM)	Chemical reaction engineering (ASEM) 2018.05–07		Materials science for electrochemistry (ASEM)
Kazuya Ishibashi 石橋 和也 (ASEM)	Nonlinear fluid engineering (ESST) 2018.06–09	–	Nonlinear physics (ASEM)
Aira Kamito 上戸 あいら (MMS)	Organometallic and heteroatom chemistry (MMS) 2018.04–07	–	Physical polymer science (MMS)
Wang Yukun 王 宇坤 (EEE)	Fundamental plasma physics (AEES) 2018.04–07	–	Coastal environmental research (ESST)
Perera Colombatanirige Uthpala Amoda (EEE)	Research Center for Next Generation Refrigerant Properties (I ² CNER) 2018.09–12	–	Mechanical engineering (GA)
Zhang Li (ERE)	Energy resources engineering (ERE) 2018.12–2019.04	–	Mineral processing, recycling, and environmental remediation (ERE)

Departments of Interdisciplinary Graduate School of Engineering Sciences: ASEM (Applied Science for Electronics and Materials), MMS (Molecular and Materials Sciences), EEE (Energy and Environmental Engineering), AEES (Advanced Energy Engineering Science), ESST (Earth System Science and Technology)

Department of Graduate School of Engineering: ERE (Earth Resource Engineering)

Other institutes: GA (Green Asia Education Center), I²CNER (International Institute for Carbon-Neutral Energy Research), IMI (Institute of Mathematics for Industry)

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