To promote recovery from radiation disaster with international viewpoint

Unique program which helps students obtain practical skills

Chika MATSUMOTO Radioactivity Social Recovery Course (2nd year student)

aid organization. While seeing many people around me going to Tohoku to support the local people there, I didn't have the opportunity to participate in such activities because of my lack of ability to work for local people on the spot, and I felt frustrated every day. I then came across this program. One of the program's most prominent

features is its inter-disciplinary curriculum and global nature. This program offers many practical courses and events, including frequent fieldwork trips to Fukushima Prefecture. Another feature of this program is the fact that it often provides us with opportunities to learn from many disaster and radiation experts from

both Japan and abroad, as well as from Hiroshima University. I am now conducting studies on animal rescue in case of disaster from a social psychological perspective. I hope to make practical contributions not only from the standpoint of my specialization but also from diverse perspectives, in the case of disasters in the future.

Program Member

Five years have passed since the

Great East Japan Earthquake. When

the disaster occurred, I was working

in a Hiroshima-based humanitarian

Program Director : Kenji KAMIYA Research Institute for Radiation Biology and Medicine Program Coordinator : Masao KOBAYASHI Graduate School of Biomedical & Health Sciences

Radiation Disaster Medicine Course

Shinya MATSUURA Course Leader rch Institute for Radiation Biology and Medicine

azuo AWAI	Graduate School of Biomedical & Health Sciences
azuaki CHAYAMA	Graduate School of Biomedical & Health Sciences
asushi NAGATA	Graduate School of Biomedical & Health Sciences
etsuji OKAMOTO	Graduate School of Biomedical & Health Sciences
hisa SHUKUNAMI	Graduate School of Biomedical & Health Sciences
lotoyuki SUGAI	Graduate School of Biomedical & Health Sciences
unko TANAKA	Graduate School of Biomedical & Health Sciences
/ataru YASUI	Graduate School of Biomedical & Health Sciences
eiji NISHIO	Graduate School of Biomedical & Health Sciences
obuyuki HIROHASHI	Graduate School of Biomedical & Health Sciences
obuaki SHIME	Graduate School of Biomedical & Health Sciences
ion CLINGWALL	Graduate School of Biomedical & Health Sciences
ukihito HIGASHI	Research Institute for Radiation Biology and Medicine
iroaki HONDA	Research Institute for Radiation Biology and Medicine
oshiya INABA	Research Institute for Radiation Biology and Medicine
oshihiro TAKIHARA	Research Institute for Radiation Biology and Medicine
atoshi TASHIRO	Research Institute for Radiation Biology and Medicine
kira OTSURU	Fukushima Medical University
kira SAKAI	Fukushima Medical University
oichi TANIGAWA	Fukushima Medical University
eiji YASUMURA	Fukushima Medical University
oshio HOSOI	Tohoku University
oboru TAKAMURA	Nagasaki university
oshiya SHIMADA	National Institute of Radiation Science
otaro OZASA	Radiation Effects Research Foundation

Phoenix Adviser

Rethy K.Chhem ource Institute (CDRI) Visiting Professor, Hiroshima university Cambodia Development May Abdel - Wahab national Atomic Energy Agency (IAEA) / Visiting Professor, Hiroshima university Gordon H. Sato Member of National Academy of Sciences / · Manzanar Project Hiroo DOHI Japanese Red Cross Society / Visiting Professor, Hiroshima university Tomoyoshi OIKAWA ma Municipal General Hospital / Visiting Professor, Hiroshima university

Radioactivity Environmental Protection Course

Kiyoshi SHIZUMA aduate School of Engineering

lironori DEGUCHI	Graduate School of Science
asushi FUKAZAWA	Graduate School of Science
Satoru NAKASHIMA	Graduate School of Science
akashi YAMAMOTO	Graduate School of Science
Shuji TAKAHASHI	Graduate School of Science
Satoru ENDO	Graduate School of Engineering
akashi TSUCHIDA	Graduate School of Engineering
Cenichiro NAKARAI	Graduate School of Engineering
Kenichi TANAKA	Graduate School of Engineering
oshinori OKUDA	Graduate School of Integrated Arts and Sciences
oshihiro YAMADA	Graduate School of Integrated Arts and Sciences
lorihisa KATO	Graduate School of Biosphere Science
akeshi NAGANUMA	Graduate School of Biosphere Science
Akira WATANABE	Fukushima University

Radioactivity Social Recovery Course

Course Leader Kiriko SAKATA Graduate School of Integrated Arts and Sciences		
Takehiro HAYASHIGAkiko OGATAGMakoto IWANAGAGHiroshi NITTONOGYoshinori SUGIURAGMakoto KATSUBEGMasoto KATSUBEGMakoto KATSUBEGHiroshi GOTOGHiroshi GOTOGYukio URABEGYukio URABEGAkiko HARANOFAkiko HARANOF	raduate School of Education raduate School of Education raduate School of Integrated Arts and Sciences raduate School of Integrated Arts and Sciences raduate School of Integrated Arts and Sciences raduate School of Letters raduate School of Social Sciences raduate School of Sciences rad	

Feb. 2016



Phoenix Letter Contents ► Program Member's Voice...P.1 Current Activity Report...P.2~P.3 Student's Voice and Program Member...P.4 Hiroshima University has established interdisciplinary PhD program s for "Phoenix Leader Education Program (Hiroshima Initiative) for Renaissance from Radiation Disaster." This broad educational program was accepted as one of the "Programs for Leading Graduate Schools" by

自然科学研究支援開発センター Natural Science Center for Basic Research and Develop 放射性同位元素研究支援分野 広島大学 ヒロシマ・フェニックス トレーニングセンタ Professor Satoru Nakashima

Radioactivity Environmental Protection Course

Could you explain the relationship between your research focus and recovery from radiation disasters?

I specialize in chemistry, particularly in radiochemistry. To be more specific, since my student days I have pursued research on electronic states and spin states of chemical substances using resonance absorption of gamma radiation. Since I joined Hiroshima University's Radioisotope Center, I have engaged in radiation management as well as chemical research. I began interacting with researchers in physics and biology, and started doing research on environmental radioactivity. With these backgrounds, I became involved in the Phoenix Leader Education Program.

Currently, I supervise four Program students. My students and I are performing research on transfer of radioactive materials in the ocean, transfer of radioactive cesium from soil into rice plants, and decontamination.

What kind of leaders are needed to support recovery from radiation disasters?

For example, teaching members of the Radioactivity Environmental Protection Course, which I'm taking part in, are from diverse academic backgrounds such as physics, chemistry, engineering or biology. They each bring their respective expertise into their approaches to support recovery from radiation disasters. As to environmental protection, there are many approaches. In addition, experts from medical and social scientific backgrounds apply different kinds of approaches to support recovery from radiation disasters

People who suffered the nuclear disaster at Fukushima Dai-ichi nuclear power plant on March 11, 2011 must have many feelings about it. I think it is the leaders who must listen to their diverse feelings, engage in communication, discuss and understand a wide range of approaches to support recovery from radiation disasters, and seek and practice optimal resolutions using their own expertise.

How can students contribute to recovery from radiation disasters by studying in this Program?

Our Program has three pillars: the Radiation Disaster Medicine Course, Radioactivity **Environmental Protection Course and** Radioactivity Social Recovery Course. I'm working in a natural science field, and can easily understand the recovery from radiation disasters approached from the standpoint of environmental protection. I can also understand medical approaches since I



Here is the interview with Dr. Satoru Nakashima, program member,

understand that radiation affects human bodies. One of the wonderful things about this Program is that it includes the Radioactivity Social Recovery Course and you can learn social scientific approaches to recovery from disasters. I myself am learning too.

Since students enrolled in the Program can take studies in all courses, it is extremely valuable for them that they will be able to understand approaches taken from a wide variety of standpoints. At the same time, students can delve deeply into their specialty in their respective specialized courses.

So after they acquire further expertise in their specialty and learn widely about approaches from other fields in our Program, I think they will be able to contribute to recovery from radiation disasters by seeking approaches using their own expertise while understanding approaches of other experts.

Would you give a message to students studving in the Program and those who wish to enroll in the Program?

Students in our Program attend classes of the Program while pursuing research in the graduate school that they belong to, to obtain a doctoral degree. For example, students in the field of chemistry need to undertake highly specialized research. That is, it is a very tough program with the paradox that students must deeply explore their specialty and study in interdisciplinary areas at the same time. However, I sincerely hope students will achieve both. And after completed the program, I'd like students to become global leaders in recovery from radiation disasters, utilizing their foundation as experts in their field and cooperating with other experts in a wide range of areas through discussion.

Current Activity Report Oct. 2015 ~ Jan. 2016

Oct	Semester start
Oct. 1	Opening Ceremony and Guidance for 4th enrolled students
Oct. 11-12	2nd Cross-disciplinary Exchange Forum
Oct. 16-17	10th Short Field Visit
Oct. 20-22	Short term fieldwork report meeting
Oct. 24-25	Program for leading Graduate Schools Forum2015
Oct. 26	6th Phoenix Leader Education Program Seminar
Nov. 1	Future Doctor 3 Minute Competition 2015
Nov. 2	Short term internship report meeting
Nov. 6	4th Liaison Committee of the Students, Introduction of Career-portfolio
Nov. 12	2nd Phoenix Leadership seminar, FY2015
Nov.18	2nd Lunchmeetig
Nov.	 Briefing session of Enrollment 19 : Higashi hiroshima campus 20 : Kasumi campus 26 : Fukushima city 28 : Higashi senda campus
Dec. 3	7th Education Seminar
Dec. 5-6	11th International Workshop on Ionizing Radiation Monitoring (held by Chiyoda Technol Co.)
Dec. 22~ Jan. 7, 2016	Application for Admission
Jan. 8-9	6th Retreat, 5th faculty and Student Opinion Exchange meeting
Jan. 12	7th Phoenix Leader Education Program Seminar
Jan. 18	8th Phoenix Leader Education Program Seminar
Jan. 21	9th Phoenix Leader Education Program Seminar

Oct. 1 Opening Ceremony and Guidance for 4th enrolled students

The Opening Ceremony of Hiroshima University Graduate School Leader Education Program was held on October 1st. 2015. 4 students from Phoenix leader Education

Program (Hiroshima Initiative) for Renaissance from radiation Disaster enrolled this October. The president of Hiroshima University, Dr.



Mitsuo Ochi, gave the opening address to congratulate and encourage the newly-enrolled students. "You will be working on various issues and learning together not only with students from Hiroshima University but also leading graduate schools from other universities. I hope that the global leaders from two programs will successfully complete the courses and play an active role in the international arena, to stand up against adversity and lead the way toward safer future."

At the guidance meeting after the opening ceremony, the encouraging remarks of the person in charge of the program and new students' self-introduction were followed by guidance on class registration and attendance.



Oct. 16-17 > 10th Short Field Visit

The short field visit is aimed at providing students during their early days of studies at this program with opportunities to deepen their knowledge about radioactive disasters and experience the importance of an inter-disciplinary approach. The 10th short field visit started when all participants came together in Fukushima on October 16, 2015 for advance orientation for preliminary learning.

On October 17, participants visited places where decontamination was being conducted and temporary storage sites for resulting materials in lidate Village, and then visited Soma Port to learn about recovery from tsunami damage caused by the Great East Japan Earthquake and projects to further develop local society. In the afternoon, they visited Minamisoma City General Hospital and learned about conditions and challenges in medical services during the period from the earthquake's aftermath to the present, and observed an internal exposure examination using a whole-body counter.

After that they went to the mouth of the Ota River to see the tsunami damage with their own eves

At the review meeting after the entire process of the visit, students expressed their views as follows: "Although I had been to Fukushima before, I had such a valuable opportunity to observe the current conditions of remaining damage caused by the tsunami and measures against radioactivity doses with my own eyes for the first time." "Seeing photos taken one or two years ago at the advance orientation on the day before the visit helped me to compare the current situation I saw with the past one."

The two-day visit provided new students at reconstruction the program with a very significant opportunity to renew and deepen their understanding about the importance of inter-disciplinary studies for them to become global leaders in reconstruction from radioactive disasters.







Observing how to use a whole-body counter for children

Oct. 26 > 6th Phoenix Leader Education Program Seminar

The phoenix program provides opportunities for its graduate students to attend training sessions such as Interdisciplinary Integrated Seminars in order to gain a range of knowledge beyond his/her own discipline. As part of this, with the support of IDEC, Hiroshima University and the LBJ School of Public Affairs, University of Texas at Austin, one Phoenix student together with three other staff and students from the TAOYAKA program participated in the 2015 summer program: Public management & leadership and politics & public policy program. Participants attended lectures at both the University of Texas at Austin and in Washington D.C. During the four and a half weeks program, they also visited a variety of state and federal institutions as well as various

other public agencies.

On October 26th 2015, a seminar was jointly organized by the Phoenix program and the TAOYAKA program for participants to share their experiences and knowledge from the Austin summer program with those students who were not able to attend. In the seminar Dr. Luni Piva, one Higashi-Hiroshima campus of the program participants, gave a



lecture on Macro-Leadership: Creating Organizational Future and Culture. Three other participants, two students and one staff member, gave presentations about what they learned and how they henefitted



benefitted. This seminar was televised to both videoconference system.

Higashihiroshima and Kasumi campus. Forty people including eight Phoenix program students, fourteen TAOYAKA program students, eight other students and ten teaching staff attended. Those who attended stated that it was a very informative and useful discussion and suggested they would like to participate in a future summer program if the opportunity presented itself.

Nov. 12 2nd Phoenix Leadership seminar, FY2015

The Phoenix Leader Education Program organizes yearly leadership seminars in order to allow program students the opportunity to consider future career possibilities following graduation. Lecturers and specialists who are at the forefront of their area of research, and in a position to act as role models are invited to present to the graduate students.

On November 12th, during the 2nd seminar of the year, Dr. May Abdel-Wahab, Director, Division of human health, International Atomic Energy Agency (IAEA), gave a lecture entitled "Leadership in an international organization". Dr. Abdel-Wahab drew on her experience as medical



doctor and researcher to discuss what researchers should be and the desirable personality traits of a leader. She encouraged an active discussion with those in attendance. She mentioned in particular that building consensus among such a diverse team, including people from a variety of different backgrounds and cultures, represented a particularly important challenge one faced while working as a director within an international organization. On the other hand, she also stated that due to the nature of the organization, its projects and their role as scientists involved in policy making, they are in an excellent position to influence a wider range of people when compared with individual clinicians. Furthermore, at the IAEA staff are well supported with specialized training and generous benefits. It is an organization that provides women an excellent working environment to serve as leader.

Thus far eight students from the Phoenix program have completed either short or long-term internships at the IAEA. The seminar offered the opportunity for students still planning their IAEA internship to join in a 💷



constructive discussion. According to participants, Dr. Abdel-Wahab's seminar was a meaningful opportunity to obtain a wide range of information, as well as hear the ideas and opinions of fellow participants.

Program for Leading Graduate Schools "Phoenix Leader Education Program (Hiroshima Initiative) for Renaissance from Radiation Disaster"

6th Retreat. 5th faculty and Student Opinion Exchange meeting

The Phoenix Leader Education Program held its 6th retreat at the Hiroshima International Youth House (Aster Plaza) on January 8 to 9, 2016. The purpose of the retreat was to bring together program members and guest speakers to review the achievements of the program students' studies and research thus far, and to discuss their expected future achievements. Thirty-eight people attended, including the program students and teaching staff

Dr. Deguchi Hironori, chairperson of the student life committee, gave the opening address. The attendants were divided into five groups and they discussed the themes and the panel discussion of the upcoming international symposium in February

On the second day, each group made their presentations based on the previous day's discussion. It was a very significant learning opportunity for the program students who share various research disciplines. Following these presentations the 5th students' and faculty opinion exchange meeting took place with active participation from the floor.

Lastly Dr. Kenji Kamiya, the Program Director, gave the closing address. This retreat ended successfully having provided the students with a good opportunity to improve their presentation and discussion skills as global leaders





Jan. 18 > 8th Phoenix Leader Education Program Seminar

In the 8th Phoenix Leader Education Program (PLEP) seminar of 2015, Dr. Masaharu Maeda (Department of Disaster Psychiatry, Fukushima Medical University), gave a lecture on January 18th entitled "Crisis Communication and mental health in a radiation accident."

The PELP seminars are held regularly for the purpose of disseminating information about the activities of our program by providing open classes and lectures to Hiroshima University students, faculty and staff.

More than 20 people, including PLEP graduate students, attended the seminar and contributed to a lively learning environment.

In his lecture, Dr. Maeda talked about his research on anxiety and fear among residents and medical personnel following a radiation disaster. He also explained the results of questionnaires that had been completed by disaster affected people.

During the Q & A session, participants discussed the differences in mental health conditions found in victims of the Great Hanshin Awaji Earthquake and those of the Fukushima accident. It was a very stimulating seminar for everyone involved.

