

15th APEC Cross Mentoring Research Activity

Research Syllabus

I . Mentor

1. Personal Information

Name	Rim, Geun-hie
Mobile Number	+82 -10-3568-4400
School or Institute	Korea Electrotechnology Research Institute
E-mail	ghrim@keri.re.kr
Major	Electrical Engineering (Power-electronics)

2. Education

	Year	Name of University	Major	Degree	Nation
Bachelor's degree	1978	Seoul National University	EE	BA	Korea
Master's degree	1988	VPI&SU (Virginia tech)	EE	MA	USA
Doctorate	1992	VPI&SU (Virginia tech)	EE	Ph. D	USA
Dissertation	Variable Speed Constant Frequency Power Conversion with Permanent Magnet Synchronous And Switched Reluctance Generators				

3. Experiences

Duration	Position	Institute or University
1978 ~Present	Research Engineer, Vice President, etc.	Korea Electrotechnology Research Institute
2010~2016	Representative Professor	University of Science and Technology (UST)
2010.10	EAPPC 2010	General Chair
1999.10	ISPP 1999	General Chair

4. Honors and Awards

Year	Title	Remarks
2007	National Medal (Woong-Bi Jang)	Korea Government
2005	Scientist Award	Gyung- Nam Province
2002	Man of the Year Award	KERI
2002	President Award	President, Korea

5. Professional Societies

Member of IEEE and KIEE

II. Syllabus

1. Course Title & Criteria

Course Title	Electric propulsion and electric vehicles
Criteria	<input type="checkbox"/> Biology & Applied Biology
	<input type="checkbox"/> Chemistry
	<input type="radio"/> Energy & Environmental Science
	<input type="checkbox"/> Integrated Science
	<input type="checkbox"/> Medicinal Science
	<input type="checkbox"/> Nano Science
	<input type="checkbox"/> Physics
	<input type="checkbox"/> Others

2. Course Objectives & Description

At the end of the course, students can understand the environmentally friendly Vehicles such as HEV (Hybrid Electric Vehicles), PHEV (Plug-in Electric Vehicles) and BEV (Battery Electric Vehicles).

They can also understand the impacts of transportation on the environment and energy.

3. Required Textbook or papers:

Clean Disruption of Energy and Transportation (Tony Seba)

High-Power Converters and AC Drives (Bin Wu)

Any Topics on Electric Vehicles 오일이 공포 (손지우)

4. Final Outcome

Quiz	[V] Due date:
Research plan	[V] Due date:
Final Report	[V] Due date:
Research Article for APEC Youth Scientist Journal	[x] Due date: February, 2024

5. Curriculum

Week	Topics and Activities	Assignments & Other Instructions
Week 1	Electric Propulsion	
Week 2	Electric Energy Resources 1	
Week 3	Electric Energy Resources 2	
Week 4	Clean Energy	
Week 5	Electric Energy and Electric Vehicles	
Week 6	Electric Motors	
Week 7	Electric Energy Conversion 1	
Week 8	Electric Energy Conversion 2	
Week 9	Li-Batteries Characteristics	
Week 10	Power and Energy	
Week 11	Concept of the Electric Vehicles	
Week 12	HEV & PHEV	
Week 13	Battery for Electric Vehicles	
Week 14	Research Article for APEC Youth Scientist Journal	
Week 15	Research Article for APEC Youth Scientist Journal	
	Mentee should submit their research article to AMGS admin team	