

# ❖ 2021F-PHYS\_0175: Physics 2 (Electromagnetism)

**Instructor : Jeungphill Hanne**

## <Education>

- **PhD, Physics**, University of California-Los Angeles, USA  
→ *Majoring in Experimental Biophysics (Dr. Giovanni Zocchi)*
- **PhD Study, Physics**, University of Florida (UF), USA  
→ Majoring in Theoretical Elementary Particle physics
- **MS, Physics**, University of California-Riverside, USA
- **BS, Physics**, Inha University, South Korea

## <Professional Experiences>

- Jul. 2010~ Aug. 2019: **Postdoctoral Research Associate**,  
The Ohio State University Wexner Medical Center, (*Adviser: Dr. Richard Fishel*)  
→ *Studying DNA Mismatch Repair by Experimental Biophysics*
- Sept. 2006~ Apr. 2010 : **Senior Research Scientist**, LG Display Co, Ltd., South Korea  
→ Optical Physics

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### ❖ List

#### 1. SCUPI 2021 Fall Academic Calendar

- Academic Calendar : Midterms & Final etc.
- Schedule of Jeungphill Hanne: Office hours etc.

#### 2. Course Introduction

- Course information
  - Subject, Text book, Lecture Hour, Office hour, Course website, etc.
- Course Objective & Scope, Course Learning Key Points
- Course Grading & Tentative Course Schedule

# 1. SCUPI 2021 Fall Academic Calendar

- Academic Calendar : Midterms & Final etc.

SCUPI Academic Calendar for 2021-2022 Fall																										
	Aug.	Sep.				Oct.					Nov.				Dec.				Jan.				Feb.			
Monday		30	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	31	7	14
Tuesday		31	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	1	8	15
Wednesday		1	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	2	9	16
Thursday	26	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	3	10	17
Friday	27	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18
Saturday	28	4	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	5	12	19
Sunday	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30	6	13	
SCU Week	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
SCU Term	Fall Term																				Winter Recess					

**Notes:**  
 Registration: Aug.26-27  
 Make-up exam:Aug.27-29  
 Classes begin for freshman:Sep.13  
 Classes begin for other students: Aug.30  
 Mid-Autumn Festival: Sept.19-21  
 National Holiday: Oct. 1-7  
 New Year's Day:Jan.1

1<sup>st</sup> Midterm

2nd Midterm

Final

*This schedule is preliminary!!*

# 1. SCUPI 2021 Fall Academic Calendar

- My Schedule : Office hours etc.

2020-2021 Spring Semester Course Schedule					
Class time	Monday	Tuesday	Wednesday	Thursday	Friday
08:15-09:00				Physics II 02 3-103	
09:10-09:55				Physics II 02 3-103	
10:15-11:00				Office Hour Physics II 02	Physics II 03 3-101
11:10-11:55					Physics II 03 3-101
Lunch Break					
13:50-14:35	Electric Circuit 01 3-106	Electric Circuit 02 3-106			
14:45-15:30	Electric Circuit 01 3-106	Electric Circuit 02 3-106	Office Hour Electric Circuit 02		
15:40-16:25	Electric Circuit 01 3-106	Electric Circuit 02 3-106	Office Hour Physics II 03		
16:45-17:30	Office Hour Electric Circuit 01	Physics II 02 3-103	Physics II 03 3-101		
17:40-18:25		Physics II 02 3-103	Physics II 03 3-101		

*But, you can come to my office anytime when I am in my office ^^*

# 2. Course Introduction

## • Course information

### • Physics for Science and Engineering 2

- Learn the basics of General Physics 2

→ **Electromagnetism**

: Fundamental to Engineering Research

### • Text Book

- Principle of Physics by David Halliday ,  
Robert Resnick & Jearl Walker,

10th edition.:ISBN-13: 978-1118230749s

### • Lecture

- Instructor : Jeungphill Hanne, PhD

[jeungphill.hanne@scupi.cn](mailto:jeungphill.hanne@scupi.cn)

- Time : Tues.(16:45-18:25) /Thr.(8:15-9:55),  
Wed.(16:45-18:25) /Fri.(10:15-11:55)

- Office Hour:Wed.(15:40-16:25) /Thr.(10:15-11:00)

- Office : 3-321A @ Zone 3

• **TA** : Iris, Martin, and Cici

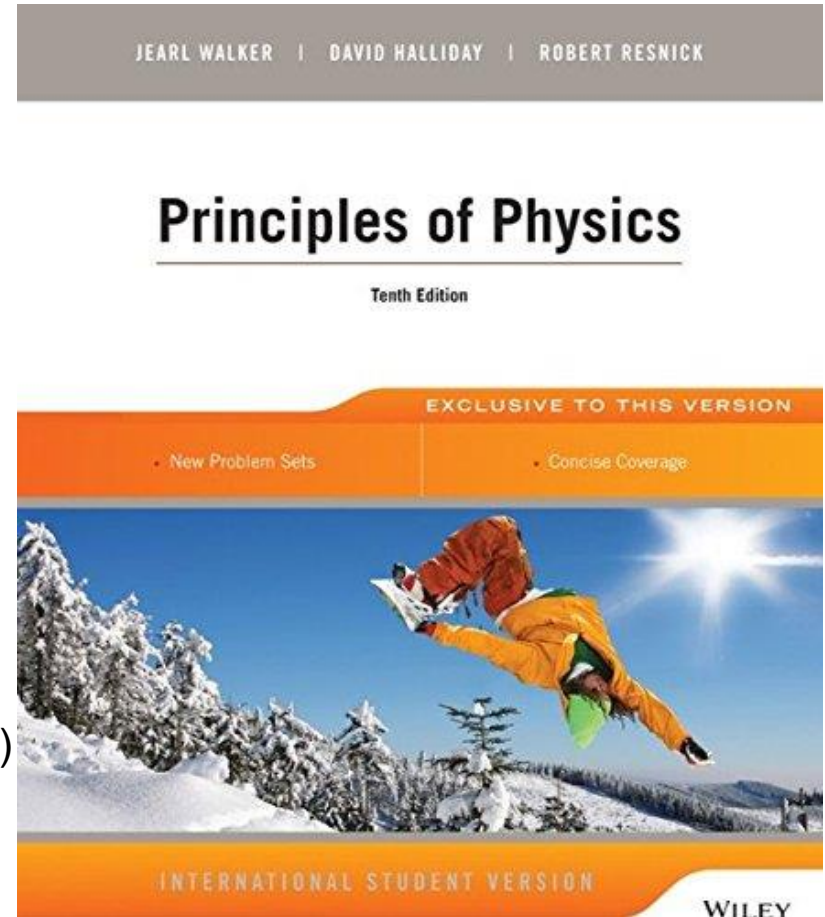
- Office Hrs : To be announced.

### • Course Format

- Lecture, and Active Participation ( i.e. Quiz, **Quiz Presentation**, etc.)

### • Course Grading

- Two Midterms, Final, Homework, Quiz, and Attitude (ex. Attendance, Focus, Engagement, Punctuality for HW, etc.)



## 2. Course Introduction

### • Course Scope & Objective

- Objective : Understanding the basics of “Electromagnetism”, Learning new Physical, or mathematical properties/theorem and eventually to be summarized to Maxwell’s eq.
- Scope : Electromagnetism(Electricity, Electrical Circuit, Magnetism, Induction, Electromagnetic Wave, Light, Geometrical/Wave Optics, etc.) →Connect to Maxwell’s equations  
→ Required : **Some mathematical Background ! (Vector Calculus, 3D Integral, Diff. equ.)**

*All concepts/Theories will be summarized  
to Maxwell’s Equation !*

### • Course Grading

- Grading Components : HW(15%), Quiz (5%), Midterm I (25%), Midterm II (25%), Final (24%) and Attitude(5% : Attendance, Focus, Engagement, Punctuality for HW, etc.)+maybe Plus alpha

*Can be Flexible!*

*Tests are not accumulative!*

# Tentative Course Schedule

Week	ENGR_0031(Electric Circuits)	Topics	Assignment
Week 1 (8/30-9/05)	Introduction & Chap 21	<b>Syllabus &amp; Coulomb's Law</b>	
Week 2 (9/6-9/12)	Chap21&Chap22	<b>Electric Fields</b>	HW1
Week 3 (9/13-9/19)	Chap22&Chap23	<b>Gauss' Law</b>	HW2
Week 4 (9/20-9/26)	Chap 23		
Week 5 (9/27-10/03)	Chap 24	<b>Electric Potential</b>	HW3
Week 6 (10/4-10/10)	Chap 24 & Review		HW4
Week 7 (10/11-10/17)	Chap 25 & <b>Mid Term 1</b>		
Week 8 (10/18-10/24)	Chap 25	<b>Capacitance</b>	HW5
Week 9 (10/25-10/31)	Chap 26	<b>Current &amp; Resistance</b>	
Week 10 (11/1-11/7)	Chap 26&Chap27		HW6
Week 11 (11/8-11/14)	Chap 27	<b>Circuits</b>	HW7
Week 12 (11/15-11/21)	Chap 28	<b>Magnetic Fields</b>	
Week 13 (11/22-11/28)	Review & <b>Mid Term 2</b>		
Week 14 (11/29-12/5)	Chap 28 & Chap29	<b>Magnetic Fields due to Currents</b>	HW8
Week 15 (12/6-12/12)	Chap 29		HW9
Week 16 (12/13-12/19)	Chap 30	<b>Induction &amp; Inductance</b>	
Week 17 (12/20-12/26)	Chap 30 & Chap32	<b>Maxwell's Equation, Magnetism</b>	HW10
Week 18 (12/27-1/2)	Chap32		
Week 19 (1/3-1/9)	Chap 33 & Review	<b>Electromagnetic Waves</b>	HW11
Week 20 (1/10-1/16)	<b>Final</b>		