

# (Syllabus)

[1] (Basic Information)					
<u>(Course Information)</u>					
/	2024 / W	(Campus)		(Seoul Campus)	
(Year/Semester)					
(Course No.)	56398	(Class No.)	01	(Credit)	3
(Course Title)	( ELEMENTARY SEMICONDUCTOR PHYSICS)	/			
		(Time/Room)			
(Course Classification)	(Major)	(Lecture Type)		(Lone-teaching course)	
(Course Type)	(Theoretical course)	(Medium of Instruction)			
(Accreditation)		(Accreditation of Engineering Education)			
(College)	ICT (College of ICT Engineering)	( )		ICT	
		(Department)			
e - class (Usage of e - class)	Yes				
<u>(Instructor Information)</u>					
(Name)	(Song, Sang - Hun)	(Department)		(School of Electrical and Electronics Engineering)	
(Office Phone No.)	02 - 820 - 5343	(Contact No.)		010 - 5225 - 8011	
E - mail (E - mail)	shsong@cau.ac.kr	(Department Phone No.)		02 - 881 - 7301	
가 (Office Hour)	13 ~ 15	(Office Location)		207 - 428	
(Course Web - site)	<a href="http://edsl.cau.ac.kr">http://edsl.cau.ac.kr</a>				

[2] / (Learning Objectives/Outcomes)		
<u>(Course Description)</u>		
가		
<u>(Prerequisites and Co-requisites)</u>		
<u>(Learning Objectives)</u>		
/		
<u>(Learning Outcomes)</u>		
가 , ,		
[3] (Course Methods)		
<u>(Teaching and Learning Methods)</u>		
(Teaching and Learning Methods)	가 (Additional Description)	
- (Lecture)	Problem Based Learning	
<u>(Assignments)</u>		
(Assignments)	(No.)	( , , )(Assignments Description)
(Practice)	5	
<u>(Textbooks, Reading, and other Materials)</u>		

[4] 가 (Student Assessment)		
가 (Assessment Item)	가 (%) (Assessment Ratio)	가 (Additional Description)
/ (Participation/Attitude)	10	가 .
(Assignment)	20	5 가 .
(Mid-term Exam)	30	

가 (Assessment Item)		가 (%) (Assessment Ratio)	가 (Additional Description)	
(Final Exam)		40		
[5] (Course Schedule)				
(Week)	(Instructor)	(Topic & Content)	(Student Assignment)	가 (Additional Description & Instructor Assignment)
1		Voltage, Current		A B ( , )?
2		Resistor, Inductor, Capacitor		: ,
3		Equivalent Circuits ( 가 )		, ? Transistor 가
4		Functions ( )		Graphs, Exponentials( ), Trigonometrics( ) Functions
5		Differentiation ( )		Definition and graphical interpretation of differentiation, Examples and Problems, Techniques of Differentiation
6		Integration ( )		Reverse operation of Differentiation Examples and Problems, Techniques of Integration
7		Taylor Series Expansion		Approximation technique to a function, Linearization( )
8		( )		
9		Differential Equations ( )		1st order Differential Equation Examples and Problems
10		Coordinate Systems ( )		2 3 , Cartesian( ), Cylindrical( ), and Spherical( ) Coordinates
11		Vectors,		Scalar product, Vector product
12		Vector Calculus		Gradient, Divergence, Curl, ?
13		Gauss 'Law, Poisson 's Equation,		Gauss 'Law, Poisson :
14		Current Conduction Mechanisms		Drift or Diffusion?
15		( )		
16		Maxwell 's Equations if necessary.		
[6] (Guide to Learning)				
Topics can be added or removed upon request.				

