

Anan College		Year	2024		Course Title	Mathematics of Electronics and Information	
Course Information							
Course Code		5297E02		Course Category		Specialized / Elective	
Class Format		Lecture		Credits		Academic Credit: 2	
Department		Course of Mechanical Engineering		Student Grade		Adv. 2nd	
Term		First Semester		Classes per Week		前期:2	
Textbook and/or Teaching Materials		Enshu to Ouyo Bibunhouteishiki, Saiensu Sha					
Instructor		Sugino Ryuzaburo					
Course Objectives							
1. We can understand Furier series and its transformation, and compute of its fundamental computation. 2. We can understand Laplace transformation and operational calsulul, and compute of its fundamental computaion. 3. We can understand the construction method of differential equation , and compute of its fundamental problems.							
Rubric							
		Ideal Level		Standard Level		Unacceptable Level	
Achievement 1		We can understand Fourier series an its tranformations and apply these for the various problems.		We can understand Fourier series an its tranformations and compute these for the fundamental problems.		We can understand Fourier series an its tranformations, and compute of its elementary problems.	
Achievement 2		We can understand Laplace transformations and the operation method and apply these for the fundamental problems.		We can understand Laplace transformations and the operation method and compute the fundamental problems.		We can understand understand Laplace transformations and the operation method and compute of its elementary problems.	
Achievement 3		We can understand the construction method of differentail equation and apply these for the fundamental problems.		We can understand the construction method of differentail equation and compute the fundamental problems.		We can understand the construction method of differentail equation and compute of its elementary problems.	
Assigned Department Objectives							
B-2 D-1							
Teaching Method							
Outline		We are to make a concentration for our class and use the knowledges and techniques about basic mathematics to construction of understanding of Fourier and Laplace transeformation and building up the solutions of ordinary and partial differential equations.					
Style		Our class is construction of the next three phases. 1. Review the important facts from the previous class. 2. Lecture about the new section. 3. Short exercises.					
Notice		Please make a good preparation and self-review. You will build up the good style to do homework of the previous class.					
Characteristics of Class / Division in Learning							
☐ Active Learning		☐ Aided by ICT		☐ Applicable to Remote Class		☐ Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
1st Semester	1st Quarter	1st	Fourier Series		We can understand Fourier series and compute its fundamental problems.		
		2nd	Fourier Series		We can understand the applications of Fourier series and compute its fundamental problems.		
		3rd	Fourier Series		We can understand complex Fourier series and compute its fundamental problems.		
		4th	Fourier Series		We can understand Fourier transeformation and compute its fundamental problems.		
		5th	Fourier Series		We can understand Fourier intergrals and compute its fundamental problems.		
		6th	Fourier Analysis		We can understand the frequency analysis using Fourier transeformation and compute its fundamental problems.		
		7th	Fourier Analysis		We can understand the Fourier analysis of differential equation and compute its fundamental problems.		
		8th	Mid-term examination				
	2nd Quarter	9th	Laplace Transeformation		We can understand Laplace transeformation and compute its fundamental problems.		
		10th	Laplace Transeformation		We can understand the applications of Laplace transformation and compute its fundamental problems.		
		11th	Laplace Transeformation		We can understand the basis and dimension of subspace and compute its fundamental problems.		
		12th	Differential Equation and Its Function Space		We can understand the linear mapping of vector space and compute its fundamental problems.		

		13th	Differential Equation and Its Function Space	We can understand the change of basis and representation matrix and compute its fundamental problems.
		14th	The Solutions of Partial Differential Equation	We can understand the construction method of partial differential equation and explain of it.
		15th	The Solutions of Partial Differential Equation	We can compute the fundamental applied problems using construction method of partial differential equation's solutions.
		16th	Final examination	

Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	60	0	0	0	40	0	100
Basic Proficiency	30	0	0	0	20	0	50
Specialized Proficiency	20	0	0	0	10	0	30
Cross Area Proficiency	10	0	0	0	10	0	20