Toyama College			Year	Year 2022		Cou	irse tle	1athematical Analysis II					
Course	Informa	tion											
Course Code 0072				Course Categor	egory General / I		Elective						
Class For	mat	Lecture				School Cre		edit: 2					
Departme	Department Departme Engineerir		ent of Electronics and Computer		Student Grade	t Grade 3rd							
Term		Second S	emester		Classes per We	Week 4							
Textbook Teaching	and/or Materials												
Instructor	r												
Course Objectives													
At the could be could	mpletion o stand and o stand and o stand and o	f this cours carry out fu carry out fu carry out fu	e, students will be indamental calcula indamental calcula indamental calcula	e able to ations on extreme ations on double i ations on first orde	e values in two va ntegrals correctly er differential equ	ariable fu y. uations c	nctions orrectly.	correctly.					
Rubric								-					
			Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		vement	Unacceptable Level of Achievement (Fail)					
Evaluation	n 1		Clearly unders to carry out fu calculations on in two variable	tands, and is able ndamental extreme values functions.	Ability to under out fundamenta extreme values functions.	stand and al calcula in two v	nd carry ations on variable and is unable to carry out fundamental calculations on extreme values in two variable functions.						
Evaluation	n 2		Clearly unders to carry out fu calculations on by writing it as integral.	tands, and is able ndamental a double integral s an iterated	Ability to understative intal ole integral ated Ability to understative out fundamental of a double integral an iterated integral			Does not display understanding and is unable to carry out fundamental calculations on a double integral by writing it as an iterated integral.					
Evaluation	n 3		Clearly unders to carry out fu calculations on order of integr integrals.	tands, and is able ndamental changing the ation in double	Ability to under out fundamenta changing the or integration in d	stand and al calcula rder of ouble inte	d carry tions on egrals.	Does not display understanding and is unable to carry out fundamental calculations on changing the order of integration in double integrals.					
Evaluation	n 4		Clearly unders to carry out fu calculations on differential equ	Clearly understands, and is able to carry out fundamental calculations on first order differential equations.		rstand and carry al calculations on rential equations.		Does not display understanding and is unable to carry out fundamental calculations on first order differential equations.					
Assigne	d Depar	tment Ob	ojectives										
MCCコア和 ディプロマ	科目 7ポリシー:	3											
Teachin	ig Metho	d											
Outline	-	In this contractions	ourse, students w s, double integrals	rse, students will learn about the basic analysis, specifically: extreme values in two variable double integrals, and first order differential equations. And, students will make basics calculations									
Stule			and overriges										
Nation		This cou	rse uses mathem	e uses mathematics learned in previous years.									
Notice		The reco	ognition of credit r	requires 60 points	or more rating.								
Charact	eristics of	of Class /	Division in Le	arning	1								
Active	Learning		☑ Aided by IC	Т	☑ Applicable to Remote Class		Class	<ul> <li>Instructor Professionally</li> <li>Experienced</li> </ul>					
Course	Plan												
2nd Semeste r	3rd Quarter	1st	<u>Theme</u> Guidance Extreme values ir	n two variable fun	Goals Guidance: Discus course. Learn how to find		e: Discus	ss the goals and structure of this d extreme values in two variable					
		and	Implicit function			functions	ons. the definition and basic property of the						
		2110					implicit functions and implicit differentiation.						
		3rd		inditional extrema			variable functions.						
		4th	Double integrals		double integral.								
		5th	Iterated integrals	grals -1-			Learn how to compute a double integral over a rectangular region by writing it as an iterated integral.						
		6th	Iterated integrals	integrals -2-			Learn how to compute a double integral over a general region by writing it as an iterated integral.						
		7th	Changing the ord		Learn how to chang the order of integration in double integrals.								
		8th	Midterm exam			Midterm examination.							
	4th Quarter	9th	Change of variab		Can calculate double integrals using change of variables.								

10th 11th 12th 13th <u>14th</u> 15th		10th	Change of variabl	es -2-		Can calculate the double integrals in the polar coordinate system.			
		11th	Application of double integrals -1-			Learn the definition of improper integrals and will be able to calculate that of a given function.			
		12th	Application of dou	uble integrals -2-		Students can calculate the volume of a solid and the centroid by using double integrals.			
		13th	Differential equat	ion -1-		Learn the meaning of differential equations and initial conditions. Can solve differential equations of variable separation type.			
		14th	Differential equation -2- Final exam			Can solve a first-order linear differential equation.			
		15th				Final examination.			
		16th	Summary			Summarize the study content and confirm grades.			
Evaluation Method and Weight (%)									
	Examination		Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total	
Subtotal		70	0	0	0	30	0	100	
Basic Ability		70	0	0	0	30	0	100	
Technical Ability		0	0	0	0	0	0	0	
Interdisciplinar y Ability		0	0	0	0	0	0	0	