

Toyama College		Year	2022		Course Title	Technical Design and Drawing III	
Course Information							
Course Code	0089			Course Category	Specialized / Elective		
Class Format	Lecture			Credits	School Credit: 1		
Department	Department of Electrical and Control Systems Engineering			Student Grade	3rd		
Term	Second Semester			Classes per Week	2		
Textbook and/or Teaching Materials	機械製図（実教出版）						
Instructor	Urakaze Kazuhiro						
Course Objectives							
At the completion of this course, students will be able to 1)Draw mechanical parts. 2)Design machines with mechanical elements. 3)Use 3-D CAD to create machine parts data.							
Rubric							
	Ideal Level of Achievement		Standard Level of Achievement		Unacceptable Level of Achievement)		
Evaluation 1	Can draw mechanical parts almost perfectly.		Can draw mechanical parts correctly.		Can't draw mechanical parts.		
Evaluation 2	Can design machines with mechanical elements almost perfectly.		Can design machines with mechanical elements correctly.		Can't design machines with mechanical elements		
Evaluation 3	Can use 3-D CAD to create machine parts data almost perfectly.		Can use 3-D CAD to create machine parts data correctly.		Can't use 3-D CAD to create machine parts data		
Assigned Department Objectives							
Teaching Method							
Outline	Students learn rules of technical drafting and how to use mechanical elements. Students draft to get the basics of mechanical design. Students use 3-D CAD to design the gear reduction device including ball bearings.						
Style	Lectures and exercises						
Notice	Can take makeup exam in need aid up to maximum of 60 points.						
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme	Goals			
2nd Semester r	3rd Quarter	1st	3-D CAD Sketch and Feature	Can create objects of primary level.			
		2nd	3-D CAD Sketch and Feature	Can create 6 objects of middle level.			
		3rd	3-D CAD Sketch and Feature	Can create 6 objects of middle level.			
		4th	3-D CAD Sketch, Feature and Assemble	Can create bolt, nut and washer.			
		5th	3-D CAD Sketch, Feature and Assemble	Can create spring.			
		6th	3-D CAD Sketch, Feature and Assemble	Can create bearing.			
		7th	3-D CAD Sketch, Feature and Assemble	Can create a link mechanism.			
		8th	mid-term exam				
	4th Quarter	9th					
		10th	Practice	Can create the dual reduction device.			
		11th	Practice	Can create the dual reduction device.			
		12th	Practice	Can create the dual reduction device.			
		13th	Practice	Can create the dual reduction device.			
		14th	Practice	Can create the dual reduction device.			
		15th	term end exam				
		16th	Confirmation of results				
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Classwork	Total
Subtotal	50	0	0	0	0	50	100
Basic Ability	30	0	0	0	0	50	80

Technical Ability	20	0	0	0	0	0	20
Interdisciplinary Ability	0	0	0	0	0	0	0