

Akashi College		Year	2021		Course Title	Practice on Mechanical Engineering II B	
Course Information							
Course Code		0043		Course Category		Specialized / Compulsory	
Class Format		Practical training		Credits		School Credit: 1	
Department		Mechanical Engineering		Student Grade		2nd	
Term		Second Semester		Classes per Week		2	
Textbook and/or Teaching Materials							
Instructor		KATOH Takahiro,SEKIMORI Daisuke					
Course Objectives							
(1) Can carry out exercises based on procedures and instructions. (2) Can use the equipment and devices correctly. (3) Can report in writing, orally, etc. (4) Can carry out exercises by working together as a group. (5) Can acquire basic knowledge and skills in mechanical engineering. (a) Understand basic knowledge of electrical circuits that are related to the control of machinery. (b) Understand the how to operate and the importance of NC machine tools including machining centers through NC programming. (c) Understand the control of robots through the production of line trace robots.							
Rubric							
		Ideal Level		Standard Level		Unacceptable Level	
Achievement 1		Can fully carry out exercises based on the instructions and procedures provided.		Can carry out exercises based on the instructions and instructions provided.		Cannot carry out exercises based on the instructions and instructions provided.	
Achievement 2		Can use equipment and devices sufficiently and correctly.		Can use equipment and devices correctly.		Cannot use equipment and devices correctly.	
Achievement 3		Can report sufficiently in writing, orally, etc.		Can report in writing, orally, etc.		Cannot report in writing, orally, etc.	
		Can carry out exercises by working together as a group while encouraging other members.		Can carry out exercises by working together as a group.		Cannot carry out exercises by working together as a group.	
		Fully understand the electrical circuit diagrams, and the functions and action of each component.		Understand the electrical circuit diagrams, and the functions and action of each component.		Do not fully understand the electrical circuit diagrams, and the function and action of each component.	
		Fully understand the operation methods and importance of NC machine tools such as machining centers through NC programming.		Understand the operation and importance of NC machine tools such as machining centers through NC programming.		Do not understand the operation and importance of NC machine tools such as machining centers through NC programming.	
		Fully understand the control of robots through the production of line trace robots.		Understand the control of robots through the production of line trace robots.		Do not understand the control of robots through the production of line trace robots.	
Assigned Department Objectives							
学習・教育到達度目標 (G)							
Teaching Method							
Outline		In this course, we will further pursue basic exercises and do applied exercises. The goals is to understand basic technology through the organic relationship between processing theory and practice, develop work processes for rational work, and develop creative abilities.					
Style		Students will split into six groups and carry out different assignments in turn. In addition, we will go on a factory tour to deepen knowledge of production methods.					
Notice		In exercises, students may be concerned with the shape of the product, its appearance, and the progress of other groups. Always keep the purpose in mind, try to work correctly, and try to grasp the essential things. Students who miss 1/3 or more of classes will not be eligible for a passing grade.					
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class		<input checked="" type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
2nd Semester	3rd Quarter	1st	Sequence basic exercise I-1(Kato)		Understand the knowledge of electrical circuit diagrams and the functions and action of each component.		
		2nd	Sequence basic exercise I-2(Kato)		Understand the knowledge of electrical circuit diagrams and the functions and action of each component.		
		3rd	Sequence basic exercise II-1(Kato)		Understand the function, action, etc. of each component by integrating them into an actual circuit, and understand a more applied circuit.		
		4th	Sequence basic exercise II-2(Kato)		Understand the function, action, etc. of each component by integrating them into an actual circuit, and understand a more applied circuit.		
		5th	NC exercise III-1(Kato)		Understand NC programming through the assignments.		

		6th	NC exercise III-2(Kato)	Understand NC programming through the assignments.
		7th	NC exercise IV-1(Kato)	Can process automatically using the program created.
		8th	Report writing	Accurately summarize the knowledge and techniques acquired in the exercises.
	4th Quarter	9th	NC exercise IV-2(Kato)	Can process automatically using the program created.
		10th	Robot assembly exercise I-1(Sekimori)	Can assemble a line trace robot
		11th	Robot assembly exercise I-2(Sekimori)	Can assemble a line trace robot
		12th	Robot assembly exercise II-1(Sekimori)	Can adjust various sensors and improve the performances.
		13th	Robot assembly exercise II-2(Sekimori)	Can adjust various sensors and improve the performances.
		14th	Factory tour	A tour of the actual production site will allow better understanding of production.
		15th	Report writing	Accurately summarize the knowledge and techniques acquired in the exercises.
		16th	No final exam	

#### Evaluation Method and Weight (%)

	Examination	Report	The work	Behavior	Total
Subtotal	0	60	20	20	100
Basic Proficiency	0	0	0	0	0
Specialized Proficiency	0	60	20	20	100
Cross Area Proficiency	0	0	0	0	0