Tsuyama College	Year	2020		Course Title	Biomeasurement Engineering

Course Information

Course Code	0166		Course Category	Specialized / Elective
Class Format	Lecture		Credits	Academic Credit: 2
Department	Department of Integrated Science and Technology Communication and Informations System Program		Student Grade	5th
Term	Year-round		Classes per Week	1
Textbook and/or Teaching Materials	Introduction to Biometric Engineering (CORONA PUBLISHING CO.,LTD.)			
Instructor	NISHIO Kimihiro			

Course Objectives

Learning purposes :
To acquire basic knowledge of sensors and signal processing circuits / systems used in biometric equipment. The purpose is to learn the basic measurement method of biological signals.

Course Objectives :
1. To understand the basic sensors.
2. To understand the sensor signal processing circuits and systems.
3. To understand the basic equipment and measurement methods used for biometrics.

Rubric

	Excellent	Good	Acceptable	Not acceptable
Achievement 1	The student can understand and accurately explain the basic sensors.	The student can understand and explain the basic sensors.	The student can almost explain the basic sensors.	The student will not understand and explain the basic sensors.
Achievement 2	The student can understand and accurately explain the sensor signal processing circuits and systems.	The student can understand and explain the sensor signal processing circuits and systems.	The student can almost explain the sensor signal processing circuits and systems.	The student will not understand and explain the sensor signal processing circuits and systems.
Achievement 3	The student can understand and accurately explain the basic equipment and measurement methods used for biometrics.	The student can understand and explain the basic equipment and measurement methods used for biometrics.	The student can almost explain the basic equipment and measurement methods used for biometrics.	The student will not understand and explain the basic equipment and measurement methods used for biometrics.

Assigned Department Objectives

Teaching Method

Outline	General or Specialized : Specialized Field of learning : Interdisciplinary subjects Required, Elective, etc. : Elective must complete subjects Foundational academic disciplines : Interdisciplinary area / Biomedical engineering / welfare engineering Relationship with Educational Objectives : This class is equivalent to "(4) Develop multi-disciplinary ability", "(5) Attain a global perspective and understanding of social development", "(6) Develop problem solving ability" and "(7) Develop communication and presentation abilities". Relationship with JABEE programs : The main goal of learning / education in this class are "(A), A-1". Course outline : In fields such as medical and welfare equipment design, biological signals are measured and the data is required. In this lecture, the student will learn the basic contents of biometric equipment.
Style	Course method : Classes will be held in the first semester due to class timetable. Courses are offered in 2 credit hours per week. Classes are centered around textbooks. Solve the exercises during class. Students are required to submit a report. Grade evaluation method : Exams (70%) + Report (30%). Regular examinations will be conducted a total of 2 times, and the evaluation ratios will be the same. Textbooks and notebooks are not allowed for the exam. Retaking Exams may be conducted for those with poor grades.
Notice	Precautions on the enrollment : Students must take this class. This is a "class that requires study outside of class hours". Classes are offered for 15 hours per credit, but 30 credit hours are required in addition to this. Follow the instructions of your instructor for these studies. Course advice : None Foundational subjects : Fundamentals of Integrated Science and Technology (1st year) Related subjects : Medical and Welfare Engineering (5th year), Welfare Equipment Design (5th) Attendance advice : It is recommended that you take notes while understanding the contents explained in the class. If you do not understand the content of the lesson, ask the teacher. If you are late for the start time, you will be treated as absent after 25 minutes.

Course Plan

			Theme		Goals

1st Semester	1st Quarter	1st	No classes this year	
		2nd		
		3rd		
		4th		
		5th		
		6th		
		7th		
		8th		
	2nd Quarter	9th		
		10th		
		11th		
		12th		
		13th		
		14th		
		15th		
		16th		
2nd Semester	3rd Quarter	1st		
		2nd		
		3rd		
		4th		
		5th		
		6th		
		7th		
		8th		
	4th Quarter	9th		
		10th		
		11th		
		12th		
		13th		
		14th		
		15th		
		16th		

Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Report	Other	Total
Subtotal	70	0	0	0	30	0	100
Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	70	0	0	0	30	0	100
Cross Area Proficiency	0	0	0	0	0	0	0