

Tsuyama College		Year	2020		Course Title	Advanced Communication Engineering	
Course Information							
Course Code		0148		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		Required Materials : "Hoki Ichi Rikutoku・Ni Rikutoku・Kokunai Denshinyo" (Denkisinkokai)					
Instructor		SHIMADA Takao					
Course Objectives							
Learning purposes : 1.To be able to explain the principle of Radio Act. 2.To be able to explain the configuration and principle of wireless communication equipment.							
Rubric							
	Excellent		Good		Acceptable		Not acceptable
Achievement 1		Understands the principle of the Radio Act and be able to explain it accurately.		Understands the principle of the Radio Act and is able to explain it.		Is able to explain the outline of the principle of the Radio Act.	
Achievement 2		Is able to accurately explain the configuration of wireless devices within the range of On-The-Ground Second-Class Special Radio Operator		Is able to explain the configuration of wireless devices within the range of On-The-Ground Second-Class Special Radio Operator		Can outline the configuration for wireless devices within the range of On-The-Ground Second-Class Special Radio Operator	
Assigned Department Objectives							
Teaching Method							
Outline		Gneral or Specialized : Specialized Field of learning : Electrical and Electronic Engineering Required, Elective, etc. : Elective subjects Foundational academic disciplines : Engineering / Electrical and electronic engineering / Communication engineering Relationship with Educational Objectives : This class is equivalent to "(3) Acquire deep foundation knowledge of the major subject area". Course outline : In this course, we will mainly learn about wireless communication technology and Radio Act.					
Style		"Course method : Mainly, board-writing is used. Sometimes, practices regarding the foundation will be held. Grade evaluation method : Exams (80%) + Reports (20%). Regular examinations will be conducted a total of 2 times, and the evaluation ratios will be the same. As a general rule, we do not allow test.					
Notice		"Precautions on the enrollment : Students must take this class (no more than one-fifth of the required number of class hours missed) and earn the credit in order to complete the 5th year course.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. Foundational subjects : Electric Circuits I (3rd year), Electronic Circuits I (3th), Electric Circuits II (4th), Electronic Circuits II (4th), Electromagnetism II (4th) Attendance advice : If you do not understand the content of the class, ask the teacher.					
Course Plan							
			Theme			Goals	
2nd Semester r	3rd Quarter	1st	Guidance, Basic properties of electromagnetic waves			Principle of electromagnetic wave	
		2nd	Electromagnetic waves and radio waves			Various radio waves	
		3rd	Basic theory of antenna 1			Basic antenna	
		4th	Basic theory of antenna 2			Gain, Effective length	
		5th	Various antennas			Basic principle of various antennas	
		6th	Radio Act(Pupose, Lincense for Radio Stations)				
		7th	Radio Act(Radio Equipment)				
		8th	2nd semester mid-term exam				
	4th Quarter	9th	Return and commentary of exam answers				
		10th	Amplitude modulation transmitter / receiver			Amplitude modulation transmitter / receiver configuration	
		11th	Frequency modulation transmitter / receiver			Frequency modulation transmitter / receiver configuration	
		12th	Radar, satellite communication equipment			Basic principle of radar	
		13th	Radio Act(Radio Operators. Operation)				

		14th	Radio Act(Supervision, Penal Provisions)	
		15th	2nd semester final exam	
		16th	Return and commentary of exam answers	

Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Report	Other	Total
Subtotal	80	0	0	0	20	0	100
Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	80	0	0	0	20	0	100
Cross Area Proficiency	0	0	0	0	0	0	0