

Tsuyama College		Year	2022		Course Title	Engineering Ethics
Course Information						
Course Code	0127		Course Category	General / Compulsory		
Class Format	Lecture		Credits	Academic Credit: 2		
Department	Department of Integrated Science and Technology Communication and Informations System Program		Student Grade	5th		
Term	First Semester		Classes per Week	2		
Textbook and/or Teaching Materials	Textbook : "Introduction to Engineering Ethics" (Maruzen Shuppan)					
Instructor	KAMIYA Ken					
Course Objectives						
Learning purposes : The purpose of this class is to deepen the understanding of the impact of science and technology on society and nature and to develop the ability to recognize the responsibility as an engineer by examining engineering ethics making use of case studies.						
Course Objectives : 1.To become capable of understanding and explaining the social background and importance of engineering ethics. 2.To become capable of understanding and explaining the roles and responsibilities of engineers in society, such as accountability, whistleblowing, product liability, and risk management. 3.To become capable of keeping in mind the effects of technology on society and nature and taking basic actions heeding the responsibility that engineers have toward society.						
Rubric						
	Excellent	Good	Acceptable	Not acceptable		
Achievement 1	The student understands and can explain the importance and social background of engineering ethics very well.	The student understands and can explain well the importance and the social background of engineering ethics.	The student understands and can explain the importance and the social background of engineering ethics.	The student has not reached these levels.		
Achievement 2	The student understands and can explain very well the roles and responsibilities of engineers in society.	The student understands and can explain well the roles and responsibilities of engineers in society.	The student understands and can explain the roles and responsibilities of engineers in society.	The student has not reached these levels.		
Achievement 3	The student can keep in mind the effects of technology on society and nature and take basic actions heeding the responsibility that engineers have toward society very well.	The student can keep in mind the effects of technology on society and nature and take basic actions heeding the responsibility that engineers have toward society well.	The student can keep in mind the effects of technology on society and nature and take basic actions heeding the responsibility that engineers have toward society.	The student has not reached these levels.		
Assigned Department Objectives						
Teaching Method						
Outline	General or Specialized : General Field of Learning : Humanities Foundational Academic Disciplines : Philosophy/Ethics Relationship with Educational Objectives : This subject is equivalent to (1) Cultivate human creative talent, rich in practical abilities, (4) Develop multi-disciplinary ability, (5) Attain a global perspective and understanding of social development, (6) Develop problem solving ability, (7) Develop communication and presentation abilities. Relationship with JABEE programs :The main goal of learning and education in this subject is "(E) Understanding Engineering Ethics". Course Outline : Due to the rapid progress of science and technology, we are facing unprecedented ethical problems that human beings have never imagined. This lecture systematically outlines engineering ethics.					
Style	Course Method : Students will study engineering ethics using the textbook, introducing as many examples as possible to avoid becoming overly abstract. Grade Evaluation Method: The result of one assignment to be completed during class hours at the end of the semester will be evaluated (100%). The assignment will assign tasks to judge the achievement of the above goals. In principle, there will be no retaking exams. As for the achievement of study outside of class hours, understanding of the content will be evaluated together with the achievements of study during class hours in the same way through the assignment.					
Notice	Precautions on the Enrollment : Students must take this class (no more than one-third of the required number of class hours missed) in order to complete the 5th year course. This is a class that requires study outside of class hours. A total of 45 hours of study is required per credit, including both class time and study outside class time. Follow the instructions of the instructor regarding study outside of class hours. Course Advice: Collect information related to ethics and public life such as the news on a daily basis and cultivate interest in related problems each day. If you have any questions, do not hesitate to raise them whether during class or before of after class. Do not give up until you have understood. As preparation and review, organize what you have learned in class thus far and prepare whatever questions you may have. Foundational Subjects : Ethics (1st year) Related Subjects : Engineering Ethics (Advanced Course 1st Year), Modern Philosophy (Advanced Course 2nd Year) Attendance Advice : This is an environmental education course and a course related to the development of nuclear power core personnel. Attendance will be checked at the beginning of each class. Persons not present at the time will be deemed late regardless of the length of the delay. Students arriving later than 30 minutes after the beginning of the class hour will be deemed absent. However, accumulation of delayed arrivals will not be interpreted as absences. Those who arrive late must signal their arrival at the time of arrival. If this is not done, the student will be considered absent.					
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				
Must complete subject							
Course Plan							
			Theme	Goals			
1st Semester	1st Quarter	1st	Introduction	General explanation of goals			
		2nd	Why One Must Learn Engineering Ethics (Study outside class hours: Study of materials based on instructions given in class. The same applies for each of the following weeks.)	Attainment target 1			
		3rd	Engineers in Modern Society	Attainment target 1			
		4th	Cost-benefit Analysis	Attainment targets 2 and 3			
		5th	Political and Moral Nature of Artifacts/Environmental Ethics	Attainment targets 2 and 3			
		6th	Human Error	Attainment targets 2 and 3			
		7th	Robot Ethics	Attainment targets 2 and 3			
		8th	Product Liability	Attainment targets 2 and 3			
	2nd Quarter	9th	Responsibility of Employers	Attainment targets 2 and 3			
		10th	Stakeholders	Attainment targets 2 and 3			
		11th	Whistleblower Protection Act	Attainment targets 2 and 3			
		12th	Intellectual Property Rights	Attainment targets 2 and 3			
		13th	Technological Innovation	Attainment targets 2 and 3			
		14th	Summary	Attainment targets 1, 2 and 3			
		15th	(2nd semester final exam)				
		16th	Handback of papers with comments				
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Assignment	Mini Exam	Total
Subtotal	0	0	0	0	100	0	100
Basic Proficiency	0	0	0	0	70	0	70
Specialized Proficiency	0	0	0	0	0	0	0
Cross Area Proficiency	0	0	0	0	30	0	30