

Tsuyama College		Year	2021	Course Title	Advanced Science
Course Information					
Course Code	0173		Course Category	Specialized / 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	Textbooks : Distribute necessary prints.				
Instructor	SASAI Yuji, MATSUDA Osamu, YOKOTANI Masaaki, SHIBATA Norito, HIROKI Kazuaki, MAEZAWA Takanobu, TAKAGI Kenji				
Course Objectives					
Learning purposes : Learn basic topics in advanced science fields (mathematics, physics, chemistry, biology, etc.) and develop comprehensive cross-disciplinary capabilities. Students will also acquire basic knowledge of earth sciences					
Course Objectives: 1 To understand and use knowledge of basic topics in advanced sciences. 2 To understand and use basic knowledge of earth sciences.					
Rubric					
	Ideal Level	Standard Level		Unacceptable Level	
Achievement 1	Understands the content of the lectures and can make advanced use of topics in the field of advanced science.	Can understand the content of the lectures and make use of the basics and topics in the field of advanced science. Understands the content of the lectures and can make use of topics in the field of advanced science.		Falls short of standard level.	
Achievement 2	Understands the content of lectures on the basics of earth science and can use it at an advanced level.	Can understand and use the basics of earth science in class.		Falls short of standard level.	
Assigned Department Objectives					
Teaching Method					
Outline	<p>General or Specialized : Specialized</p> <p>Field of learning : Interdisciplinary subjects</p> <p>Basic disciplines: Mathematics, Natural Science / Physics / Chemistry / Life Science / Earth Science</p> <p>Relationship with Educational Objectives : This class is equivalent to (4) Develop multi-disciplinary ability, (6) Develop problem solving ability, and (7) Develop communication and presentation abilities.</p> <p>Relationship with JABEE programs : The main goal of learning/education in this class are "(A)" , "A-1" also "(D)" "D-3" are involved.</p> <p>Class outline : Students will learn the basics and topics of advanced science fields (mathematics, physics, chemistry, biology, etc.) through omnibus, and develop comprehensive cross-disciplinary skills. Students will also learn the basic knowledge of earth science.</p>				
Style	<p>Course method: Introducing topics in advanced science fields (Mathematics, Physics, Chemistry, Biology, etc.) in an omnibus lecture style. In addition, the 4-week Earth Science class will be taught by Mimasaka University faculty.</p> <p>Grade evaluation method: Issue report (100%).</p>				
Notice	<p>Precautions on enrollment : This subject requires study outside of class hours. Class are offered 15 credit hours per credit, but 15 credit hours are required in addition this. Follow teacher guidance on these studies. In order to complete the course of the academic year, it is essential to take courses (the number of absentee hours is less than one-fifth of the prescribed number of class hours) and take credits.</p> <p>Course advice : This is an interdisciplinary subject, and it is indispensable to tackle the content positively.</p> <p>Attendance advice : If late beyond half the class time after that, it is considered an absence.</p> <p>Basic subjects : Introduction to Science and Engineering (1st year), Trans Exercise of AII program I (3rd), Trans Exercise of AII program II (4th), etc.</p> <p>General Physics (3rd year), Differential and Integral I (2)nd, Differential and Integral I (3rd), Differential and Integral II (4th)</p> <p>Related subjects : Mechanical system (5th year), Electrical and Electronic system (5th), Communication and Information System (th5), Graduation Thesis (5th)</p>				
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					

Required subjects							
Course Plan							
			Theme	Goals			
1st Semester	1st Quarter	1st	Guidance				
		2nd	Topics in the field of mathematics	Understand and use knowledge of topics in the field of mathematics.			
		3rd	Topics in the field of mathematics	Understand and use knowledge of topics in the field of mathematics.			
		4th	Topics in the field of physics	Understand and use knowledge of topics in the field of physics.			
		5th	Topics in the field of physics	Understand and use knowledge of topics in the field of physics.			
		6th	Topics in the field of chemistry	Understand and use knowledge of topics in the field of chemistry.			
		7th	Topics in the field of chemistry	Understand and use knowledge of topics in the field of chemistry.			
		8th	(1st term midterm exam)	Guidance on questions and reports up to 7 weeks.			
	2nd Quarter	9th	Topics in the field of biology	Understand and use knowledge of topics in the field of biology.			
		10th	Topics in the field of biology	Understand and use knowledge of topics in the field of biology.			
		11th	Overview of the earth	Understand the solar system, planets, satellites, the atmosphere and water of the earth.			
		12th	Inside and activity of the earth	Understand the internal structure of the Earth, magma formation and volcanic activity, own generation and fault movement			
		13th	Atmosphere and ocean 1	Understand the structure and composition of the atmosphere, atmospheric pressure, thermal contraction of the atmosphere, and motion of the atmosphere.			
		14th	Atmosphere and ocean 2	Understand the movement of the atmosphere, the general circulation and meteorological phenomena of the atmosphere, and the movement of seawater.			
		15th	(1st term final exam)				
		16th	Report guidance	Guidance on questions and reports up to 14 weeks.			
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	0	0	0	0	100	0	100
Basic Proficiency	0	0	0	0	60	0	60
Specialized Proficiency	0	0	0	0	40	0	40
Cross Area Proficiency	0	0	0	0	0	0	0