

鳥羽商船高等専門学校		開講年度	令和06年度 (2024年度)		授業科目	応用数学 3	
科目基礎情報							
科目番号	25105			科目区分	一般 / 選択		
授業形態	講義			単位の種別と単位数	学修単位: 2		
開設学科	情報機械システム工学科			対象学年	5		
開設期	前期			週時間数	2		
教科書/教材	多変量解析がわかる						
担当教員	伊藤 立治						
到達目標							
・ to understand what multivariate analysis is ・ to understand what regression analysis is ・ to understand what principal component analysis is							
ルーブリック							
	理想的な到達レベルの目安		標準的な到達レベルの目安		未到達レベルの目安		
評価項目1 Can you explain what multivariate analysis is?	You can explain what multivariate analysis is very well.		You can explain what multivariate analysis is.		You cannot explain what multivariate analysis is.		
評価項目2 Can you explain what regression analysis is?	You can explain what regression analysis is very well.		You can explain what regression analysis is.		You cannot explain what regression analysis is.		
評価項目3 Can you explain what cluster analysis and principal component analysis are?	You can explain what principal component analysis is very well.		You can explain what principal component analysis is.		You cannot explain what principal component analysis is.		
学科の到達目標項目との関係							
教育方法等							
概要	The main purpose of this subject is not to develop mathematical skills. In age of data science, the most important skill is that you can use various data from the internet and extract valuable information from them. In this subject you learn basic skills that are used in data science. The skills you can learn in this subject will help you solve the problems in complicated business situation in the future.						
授業の進め方・方法	We use a Japanese textbook. In class we speak English. You are not allowed to speak Japanese in class. You have to ask questions in English in class. But you can come to teacher's room and ask questions in Japanese after class. Examinations are written in Japanese.						
注意点	You should read the textbook before class. Try to concentrate on understanding the essence of each analysis. You don't have to worry about the complicated equations too much. Don't worry. You can learn data science. Class schedule can be changed a lot due to understanding level of students or additional explanation						
授業の属性・履修上の区分							
<input type="checkbox"/> アクティブラーニング		<input type="checkbox"/> ICT 利用		<input checked="" type="checkbox"/> 遠隔授業対応		<input type="checkbox"/> 実務経験のある教員による授業	
授業計画							
		週	授業内容		週ごとの到達目標		
前期	1stQ	1週	Introduction the purpose of multivariate analysis and some analysis of data science		You can explain the purpose of multivariate analysis and some analysis of data science.		
		2週	preparation for multivariate analysis micro data, deviation		You can explain micro data and deviation.		
		3週	corelation efficient		You can explain corelation efficient.		
		4週	path diagram		You can explain path diagram.		
		5週	Excel solver		You can explain Excel solver.		
		6週	regression analysis		You can explain regression analysis.		
		7週	simple regression analysis		You can explain simple regression analysis.		
		8週	mid-term examination				
	2ndQ	9週	simple regression analysis		You can explain simple regression analysis.		
		10週	multiple regression analysis		You can explain multiple regression analysis.		
		11週	principal component analysis		You can explain principal component analysis.		
		12週	factor analysis		You can explain factor analysis.		
		13週	two-factor analysis		You can explain two-factor analysis.		
		14週	structural equation models		You can explain structural equation models.		
		15週	discriminant analysis		You can explain discriminant analysis.		
		16週					
モデルコアカリキュラムの学習内容と到達目標							
分類	分野	学習内容	学習内容の到達目標			到達レベル	授業週
評価割合							
	試験	発表	相互評価	態度	ポートフォリオ	合計	
総合評価割合	80	0	0	20	0	100	
基礎的能力	60	0	0	10	0	70	

專門的能力	20	0	0	10	0	30
分野横断的能力	0	0	0	0	0	0